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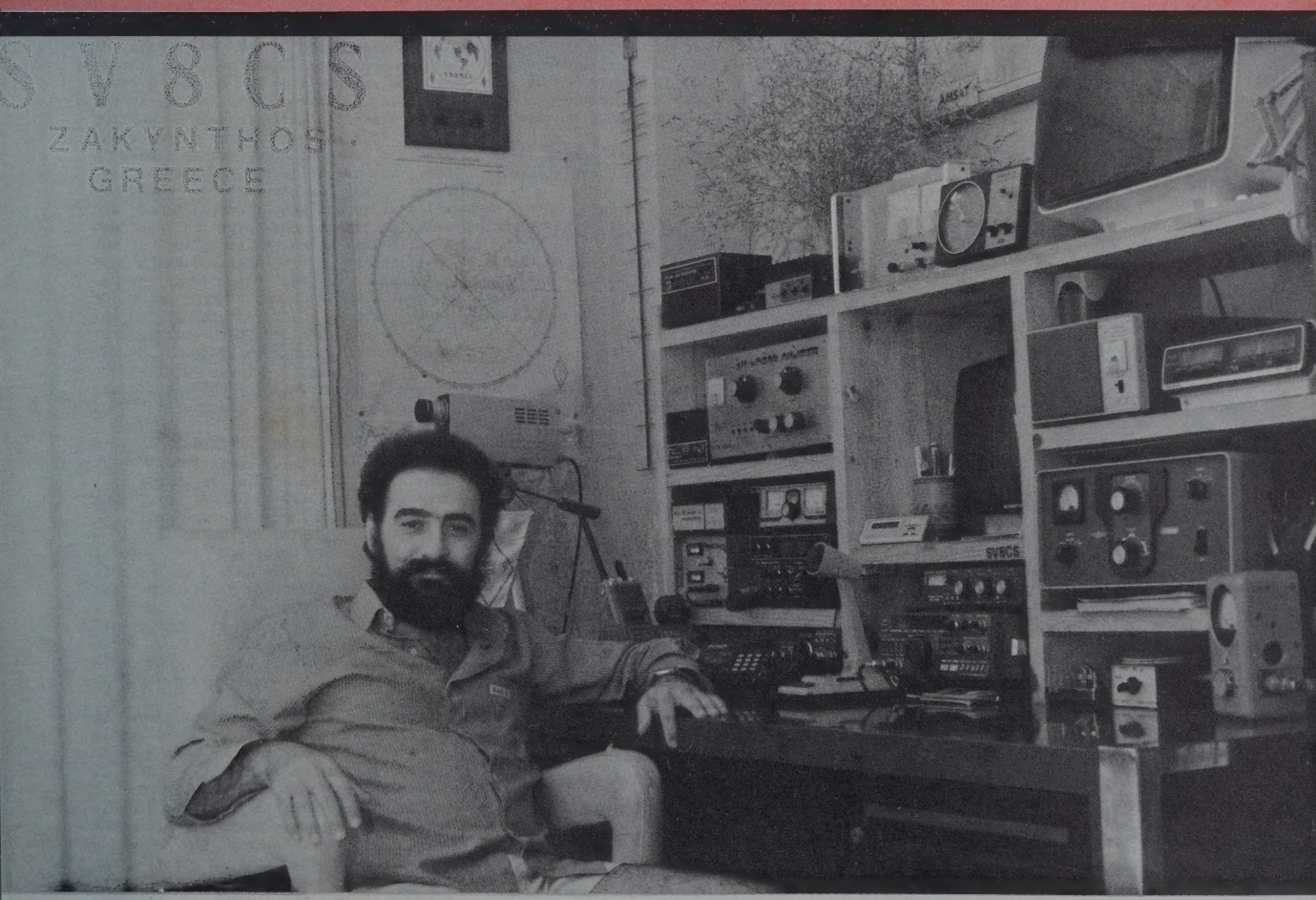
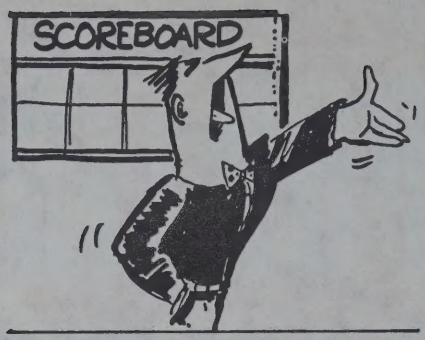


Spiros Aumanos, SV8CS - Zakynthos Island, Greece
Will be very active on 80 and 160 meters this season



CQ WW DX CW CONTEST RUMORS

N2AA	MM	4638	156	512	8.9M
	160	187	19	59	
	80	440	26	84	
	40	1478	36	123	
	20	1743	37	122	
	15	735	29	106	
	10	55	9	18	
W3LPL	MM	3906	153	487	7.25M
	160	121	16	51	
	80	358	22	25	
	40	1157	36	115	
	20	1470	37	117	
	15	771	30	110	
	10	31	12	19	
K2TR	MM	3138	146	417	4.77M
	160	140	17	46	
	80	250	24	77	
	40	900	34	94	
	20	1529	34	104	
	15	500	26	83	
	10	910	11	13	
N5AU	MM	3148	160	443	5.5M
K1KI	MS	2180	134	416	3.5M
W1PV	80	610	27	85	
N4RJ	80	380	30	91	
W5PWG	80	74	16	30	
AA4LU	40	480	36	97	

MORE SCORE RUMORS CQ WW SSB

HC8X	MM	11926	148	496	
VP2VCW	MM	12967	146	512	
PA3CEF	MS	2213			1.7M
J87DX	AB	4752	117	396	6M
K1AR	AB	2507	129	423	3.9M
K1DG	AB	2005	127	402	3.0M
K1UO	20	1800	33	133	133K
VE3BMV	80	1659	25	90	390K

CANADIAN CONTEST CHAMPIONSHIP
1984 RESULTS
Bob Nash, VE3KZ

CATEGORY CW+SSB		MULTI OPERATOR	
1. VE3NBE	125	VE7ZZZ	13
2. VE3BMV	119	VE3BVD	11
3. VE2AYU	107	VE6CAW	9
4. VO1QU	100	VE5VCA	8
5. VE6CB	100	VE3UOT	6
6. VE3CWE	98	VE3OCU	5
7. VO1AW	95	VE3CYX	5
8. VE7EIK	86	VE6OU	5
9. VE3DZV	84	VE2FOT	5
10. VE5RA	74	VO2WL	4

CATEGORY CW		CATEGORY PHONE	
1. VE3DZV	82	VO1QU	86
2. VE3NBE	62	VE3BMV	77
3. VO1AW	61	VO1CV	74
4. VE6OU	46	VE7EIK	67
5. VO1MP	44	VE3EEW	67
6. VE2AYU	43	VE2AYU	63
7. VE3BMV	42	VE3NBE	56
8. VE5RA	41	VE1YX	55
9. VE3INQ	39	VE4CCC	52
10. VE3ST	38	VE2YM	51

SINGLE BAND CATEGORY

1. VE3BMV	66	6. VO1QU	51
2. VE3NBE	58	7. VE3INQ	50
3. VE1BNN	55	8. VE1YX	49
4. VE5RA	54	9. VO1CV	44
5. VE7EIK	53	10. VE5XU	42

A total of 20 contests during 1984 were used for CCC points calculations.

WATCH YOUR LOGGING!

Log checkers are tightening up and it appears that it would be wise for the serious operators to use the tape recorders in case the log is questioned. There are some video recorders on the market capable of recording stereo sound channels. VHS type can offer about 6 hours of recording time per cassette. Maybe even using video camera to record the actions of the operator would not be such a bad idea. (You could study your mistakes in slow motion later on.)

John, VE3MFA received a letter from Don Mc Clenon, N4IN, CQ 160 m Contest Director:

"...Strict enforcement of the disqualification criteria would have knocked you out on both modes this time, because of the large number of errors and dupes they produced. Most errors appear to be too much haste or carelessness, rather than deliberate. Whenever possible, I corrected the calls and gave you credit..."

"All logs are run through the computer, which automatically assigns correct points for each QSO. rings up each new multiplier as worked, counts the dupes, giving them zero points, and at the end gives final score,.. While this is going on, each call is compared with the world master list up to that time, to see if it is in there. If it is a new one (a unique), it is kept in limbo, until someone else works it; then it is entered. Uniques can be compared with all likely other prefixes, so if WA1ABS is a logged unique, I can see if others worked W1ABS, K1ABS, WB1ABS, etc. Probable CW errors like WA1ABH or WA1ADS can also be checked. Phonetic sound alikes can be checked on phone. A reasonable number of such errors can simply be corrected and allowed, or they can be declared zero-points DUDS (operator deceased no such call licensed, or station not on during the contest). Other on hand logs confirm dupes and similar calls. The latest call book helps with states and calls. A state checklist is made of those active in the rarer states and calls. A state checklist is made of those active in the rarer states to verify claims of working them. If nothing fits, the operator has probably made an error that produced a DUD, or has deliberately inserted one. Even a big log has very few good new calls after the list is established, and most of these tend to be in his own area. They can be accepted without verification if the operator has a good past record for accuracy. This year we had 6107 valid CW and 6269 valid Phone calls active, after running 180,000 calls through the computer, with special attention to about 2000 of them."

Followed list of errors, listing 54 errors on CW, leaving 429 QSOs valid and 75 errors on phone, leaving 651 QSOs valid.

"I hope you can figure out how to make major accuracy improvement next time. If not sure of a call, ask for repeat, phonetics on phone, etc. One wrong letter is someone elses call. No more guessing. Life is too short for me to do this again for you and several others with logs this bad. I barely made the magazine deadline. next time all errors will be counted as DUDs, and logs will be disqualified at the cutoff point, so I can move on."

"I hope you will profit from this lenience and will be up there again next year." 73, Don, N4IN

Not even a computer or procedure is perfect. Number of "errors" were really not errors. VE3CDX flagged as a dupe of VE3CVX is for real and not a DUD! We even had a VE3CYX, who is now VE3XO, and those three operators were frequently told that they were worked, when they were not! In a recent CQ WW phone contest I counted about 40 errors just between the log and a dupe sheet. Is anybody perfect out there? (VE3BMV)

1986 Amateur Radio PHOTO CALENDAR

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Section, Zone and Grid Maps
Photos of Operators, Stations

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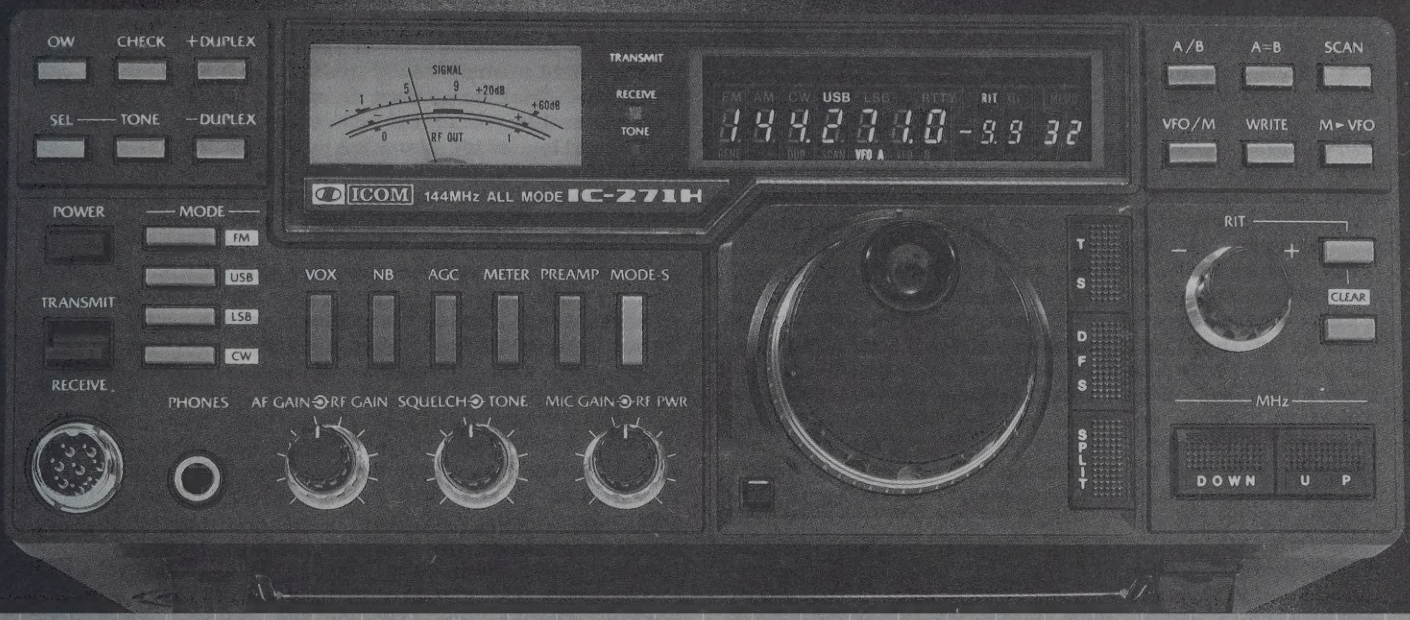

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ve3bmv Radiotorial

We made it! Another year goes by. It's time to do some recollecting and evaluating of what happened during this seemingly short period of time. We lost some dear friends and hams, we worked a few new countries and made or lost some records, maybe even antennas. We could go on summarizing the good and bad things that happened during 1985. We can do that on our own, analyze the past and see where we can improve, how to better ourselves and how to help others.

Someone said that for a person to be happy, it takes three things: to love, to be busy and to look forward to new things. I would like to add the fourth: to believe in God and to behave by His rules. Without getting too deeply into that philosophy, let's have a look at our radio world situation.

We hams should be the happiest bunch on earth. We "amare" our hobby - amateur radio. Most hams are busy building something or working something on the bands. The younger hams have more things to look forward too. Those who have "worked them all," are kind of in the blind corner. Nowhere to go? Although, if one focuses on the sport aspect of our hobby one can reach the top but, what is left? There are still so many areas in which we can get involved, that I dare to say that I would like to see the ham who has really done it all and reached the pinnacle in all areas. This is quite difficult to achieve and it is getting "worse." We are getting into all kinds of new modes and computer equipment which opens up a whole new bowl of wax.

We must try to bring freshness to the stale quarters of radio. Looking into the new year, we are offering a few things that hopefully, will wake you up and give you an opportunity to do something challenging and new. Among those things are our WCC - World Contest Championship, DXCA award and also, the soon to be announced IRSA WRC contest. This year the IRSA will promote amateur radio as a sport, especially to our youngsters. We will prepare some literature and videotapes showing how to have more fun with the radio and how to build and maintain an effective station. Also, we would like to promote all aspects of amateur radio. Above all, we are for numbers but through and with quality. We do not need hordes of "licensed" hams who are a product of no exam, no CW and the like. There is the CB for those! Why ruin what our fathers have built for decades? Have you listened lately on the bands during the weekend?

We are appealing to all of you who love our hobby. Please join us in our effort to improve the quality of operating on the ham bands with new, more proficient hams and sportsmen. Offer your expertise to your local school. Show them that amateur radio is a fun sport, in which you can compete and help others in time of need. We have to bring new blood to our clubs and influence the youngsters to become enthusiastic replacements for us. If we let some ignorados steer us through deregulation and relaxed exams into the CB like mess, who will benefit from that? What kind of challenge will attract the new generation of amateurs? Maybe, to everyone's surprise, we will see an increase in CW activities. More and more hams will turn to CW just to get away from the garbage that sometimes exists on phone. There is considerably less of that going on CW and I personally enjoy working CW especially in the contests and when chasing DX. Computers can and are helping to make the CW operating easier and more fun. Where everything else fails, the CW gets through. It is also the easiest form of communication between man and computers. We know how much easier it is to make the computer "understand" code than human speech even though code is a bit slower than speech. But, we have to pay the price somewhere. Computers are helping here.

On October 25, 1985 (was this done purposely during CQ WW contest weekend to keep the contesters out?) representatives of CRRL and CARF met with DOC in Ottawa to hear DOC's proposal for "Restructuring of the Amateur Service." They were lamenting that the average age of Canadian hams is 55 years (maybe hams just live longer?) and that during past year the number of new licenses fell to 1.1%. Very few young people are joining the ranks. What will happen when the old-timers pass on? Will Amateur Radio as we know it exist? Those are the questions asked in Canadian NewsFronts page in the December QST.

The proposed remedy was to come up with a new class of amateur radio license, class A, where you pass easy exams, no morse code and the holders of this license will not be allowed to build their own transmitting equipment! They could operate all bands above 30 MHz with 250 Watts of power.

What progress! While technology is galloping ahead, here our admirals are saying that you don't have to learn or earn. "We will make it easier for you to get the ticket." Just keep our statistics up. On the other hand, our next door neighbors are suing us for putting up towers and interfering with cheap radios. What are governments doing in helping us to stay with the radio? On one hand it seems there is a desire for greater numbers, while on the other hand, there is an ignorance for the needs of those who decided to get involved in amateur radio.

Rather than trying to hand out licenses for no effort, why don't we intensify our efforts to promote amateur radio and to make it known to a wider audiences what are we all about. With this effort the numbers will increase automatically and they will be of a high quality. If one wants to do well in todays hi tech world, one HAS TO LEARN. If one chooses to be ignorant, one can only blame himself the lack of opportunities. Who has seen the report about ham radio contest in the sports section of TV or radio news? How can we expect people to know about us if we are a well kept secret? What a paradox - many hams were there at the birth of the radio and the TV empire and yet we are ignored!

We have recently acquired the 900 MHz band. If the no code, entry level license has to be, why not use the 900 MHz band for this purpose. This would

be ideal for personal communications, repeaters and far away from the real hams. There would be enough room to accommodate a large number of hams and it could satisfy those who just want to talk to their fellow ham without getting technical. They can obtain some experience without potentially ruining what we have built.

DOC has also indicated its intentions to proceed with deregulation of mode subbands, which would allow Canadian amateurs to operate any mode on their allocations, relying on volunteer adherence to recommended band plans to maintain order. It sounds nice and it would give us some flexibility, but as the majority already expressed their opinion, it is not desirable. While there is a push to end the voluntary bandplan on 160 meters, here in Canada, we are trying to get a regulation through which will create more conflicts.

The DOC issued a notice calling for the end of issuing special Amateur Radio prefixes. The only edge we have in representing our country in the international competitions is being taken away. One hand is trying to be magnanimous, while the other hand is slapping us away. Make up your mind DOC! I am just curious to know how many real DXers, contesters or presently active hams are sitting on those committees which are negotiating for us. (No one from the Canadian DX Association has been invited or involved, as far as we know.) We remember when Canadian Amateur Radio Federation members were outraged, because DXers managed to get two countries, St. Paul and Sable Islands "recognized." How can we expect representatives like that to stand up for those who operate on the bands daily and represent their country in the international competitions?

Let's don't just sit there. After careful consideration of the implications that might follow this particular ruling, write your comments to the DOC. Why should we "force" amateur radio at those who don't want to accept it for what it is? Do we want to fill the bands with operators who can't tell the connector from the microphone? Does anyone regret learning morse code or technical stuff? If there is a shortage of, let's say pilots, should we give out pilot licenses just for being able to say "Roger" and driving a car? Or do we go out there and try to lure the people in with some benefits and to educate them to be a good pilots. Why are we trying to turn the logics applied to Amateur Radio upside down?

One method of keeping things interesting is to have a continuous supply of fresh ideas. This is valid for all aspects of our lives including amateur radio. Quite often we find that a club or an organization is as good as the bunch of individuals that are running it. It is not unusual to see an organization flourish, until another, quite often "professional" officer takes over. He thinks that he can do the job as well as his predecessor. Unfortunately, because of his lack of skills, background, knowledge, experience and everything else that makes a good leader, we see this "professional executive" go from one outfit to another, leaving a trail of disaster behind him. Sometimes it is harder to restore then to build anew. In my opinion there are too many rules and traditions which makes us bias against progress. Competition advances progress. Where one has a hard time of convincing the "old master" that he is perhaps wrong or out of touch, it is more effective to demonstrate the better way. If indeed it is a better way, eventually it will gain support.

In order to grow, we have to make it interesting, challenging and give it good publicity. If the bureaucrats keep coming up with obstacles, then no wonder the people will get turned off.

One of the reasons I have undertaken the *RADIOSPORTING* adventure was that I wanted to start something fresh. Having the benefit of being involved with amateur radio for over 28 years without interruption and achieving a few "impossible" goals, I felt that I know what the active ham needs. I admit to almost complete ignorance in the publishing business, but I figured it shouldn't take me long to learn the tricks of the trade. Thanks to that ignorance I have jumped into this adventure. Because of my persistence and "never give up" spirit I am still doing it. Most important, thanks to your support and encouragement I will try to make this magazine your No. 1 reading! Thanks a billion to all the contributors and writers, please keep it coming. To those who as yet have not written, please grab a pen or a keyboard and let us know about you, your club and what's happening. Many of us are anxious to hear from you and *RADIOSPORTING* is here to get it out fast!

Are you looking for a new country? Here is a good one for you - West Berlin. It qualifies under the criteria of separation by a foreign country, in this case Y2 - East Germany. On top of that, it is administered by "occupying forces," but that criteria of separate administration has been removed from the DXCC rules. I wonder what is going to be W1XX's excuse now. Will it be proclaimed an island which is not far enough from the administering territory? Wake up West Berliners and fight for your country!

How about North and South Korea? Isn't the barbed wire border and separate governments a good enough reason to qualify for DXCC? Let's make the rules clear and save those searching types from wasting their time.

It was satisfying to see the good conditions during the CQ WW CW contest. It looks like more records were shattered and those who did not believe that the bands are dead, reaped the benefits. It was fun on CW even when the Europeans were heard on the East Coast the early afternoon with S6 to S9 signals and only W1FV was able to crack some of them. You will find out why if you read his article on verticals. Many think that you need a beam way up there to work anything on 80 and 160, but this is not so. As N7CKD discusses in his column, don't overlook that "short" tower you have. With some concealed wires it can outrun many "wonder antennas" especially when working DX. Buck for buck, dB for dB, way to go!

In our November issue we said that QST did not publish the CAN-AM contest results. They were finally put in the November issue of QST, after the next contest was run. They were submitted in time but nothing was heard. Everyone expects to see the results sooner than a year after the contest. We thank QST for publishing them. The certificates should go out very soon.

Please check your mailing label, if it says 8512 or less, January issue is your last one, please renew. No need to fill out the form, just write your call sign on your check.

Can we talk? Lets hear your opinion about the sore points of our hobby!

Have a happy, healthy, peaceful and prosperous 1986! 73, Yuri

DX NEWS

ART HUBERT, N2AU

436 N. Geneva Street, Ithaca, NY 14850

The DX news from around the world as exchanged on the IRSA net and from other sources: Frankford Radio Club, Kansas City DX Club Newsletter, PVRC Bulletin, QRZ DX, NCDXC CW Bulletin, South California DX Bulletin, Westlink Report, CRRL News, Worldradio, KE2C, DJ9ZB, VE3BMV.
The IRSA net operates on Sundays around 14.200 MHz, starting at 2000 Z and 3.830 (Mondays and Fridays at 0200 Z).

It doesn't seem possible, but 1986 is here already. With it is the expectation of the end of sunspot cycle 21, possibly by October 1986 and the ushering in of cycle 22. Hopefully it will be as good as cycle 21 was.

During the CQ WW DX phone contest in October, one wouldn't have thought we were near the bottom of the sunspot cycle. Conditions were excellent on all bands during the contest. On the East Coast, ten meters opened to Europe for several hours on Saturday; 15 opened to Japan and had a steady stream of Europeans during the daylight hours; 20 was gangbusters as usual--open around the clock. The signals on 40 were 59+, and some of the multiops worked 100 countries on 75 meters again. 160 was good into Europe on Saturday night.

Conditions came close on several bands to rival conditions when the cycle was at its peak. K1AR, John Dorr, operated his station to a new USA high single operator, all-band classification. Stu, KC1F, operated K1OX to a new USA high on 20 meters mono-band. KX4S in Virginia possibly set a new USA multi-single record. In the multi-multi category, it looks like perennial N2AA won it again, followed by W3LPL, N5AU, and AD8P. Doesn't sound like the bottom of the cycle, does it? It looks like the CW portion was also good.

For the DXer, 1985 was a good year. The activity from BY land should have erased it from your needed list. The FOOXX operation from Clipperton erased that one for many. Other operations, such as DK/S9, XF4MDX, HC8E, XU1SS, DL0MAR/9G, and others helped many towards DXCC, and I believe 1986 will be even better.

For myself and you, I hope, I am looking forward to Radiosporting's new DXCA award. You can find the rules for this award in the November issue of Radiosporting or write me, and I'll send you a copy.

See you in the pile ups.

73 till next month, Art

AZ, South Orkneys
AZ1A or AZ1ZA operation by Juan, LU8DTQ from mid December through March 1986. Also on RTTY 14090 and 21090.

A35TN, Tonga
by VK3DET from Nov. 25 to Jan. 3

A71AD, Qatar
Op Mike will leave A71 at the end of December and will not be returning. Upon his departure, he has to surrender his logs to the licensing authorities. This will make working Qatar much harder.

BY, China
Stations BY1PK and BY4AA were both active in CQ WW CW contest on 40 meters. Also stations BY1QH and BY1SK are active on 20 m SSB.

D2BCW, Angola
This one has been showing up around 14170 from 1900 to 2030Z almost daily for the past week. He handles the pileups quite well. Everyone is hoping this one is valid. If you do work him, QSL via Manuel Dos Santaos, POB 63, Luanda, Angola.

FT8X, Kerguelen Isl.
For anyone needing this one, both FT8XA and FT8XB have been active daily on 40 meters, both long and short path times. Try 7005 at 0000Z and 1230Z.

FB8Y, French Antarctica
FE6APG will be leaving for FB8Y on December 3 from Hobart, Tasmania. From December till February 1986, he will operate on 10,103. Then in March, he will be active on 7006, 14040, 21040, 28040, and on SSB, 14195. QSL via FE6DZU.

JTODJT, Mongolia
Op. Serge has been active on 20 meters on 14025 at 1500Z. U.S. stations have some problems breaking through the Europeans. QSL via I8YGZ.

TA1A, Turkey
Has been very active on 40 meters. Check 7005 at 0130Z.
TA1MX near 7002 from 0230Z. QSL to Box 28, Istanbul.

TN8EE, Congo
Roger will probably have left TN8 land when you read this. He is returing to France for several months. It is rumored that his replacement will also be an amateur.

TZ6WC, Mali
operates around 14187 at 1630Z, moving to 40 and 80 later on.

VK9Y, Cocos Keeling
VK6IR has postponed his expedition to VK9Y for a year due to new job pressures.

VK0, Heard Isl.
According to Jim Smith, P29JS, there will be another scientific expedition to Heard in the beginning of 1986, and he hopes to accompany this one.

VQ9LD, Diego Garcia
Larry showed this one on November 7, working Europeans, on 7001 at 2000Z. He had a very strong signal into the States for several hours, but only worked one U.S. station. He will be there for at least two weeks. QSL via AJ2W.

VU2TEC, India
Op. Venu has been very active on 40 meter CW every morning, starting at 1200Z near 7005. QSL direct.

VS6DO, Hong Kong
Paul shows quite often on both 40 and 80 meter CW. Try 7005 at 1200Z and 3505 at 1145Z. He will also arrange 160 meter skeds. QSL via K4CIA.

XT2BR, Burkina Faso
formerly Upper Volta, Alain, XT2BR on 14208 at 1900. QSL Box 116, Ougadougou, Burkina Faso.

YB0ARA, Indonesia
Check 3,795 at 2230Z for Phil's long path signals. He has been very strong into the East Coast nightly. He is also quite active on 160 meters.

ZD7AL, St. Helena
Mike has been active on 20 meter SSb near 14189 at 21-30Z. He then moves down to 40 meters, where he can be found on 7080 looking for U.S. stations 7210 at 2230Z.

ZD8LIK, Ascension Isl.
active around 21285 from 2000 and 14190 from 2200.

ZK3RW, Tokelaus
Ron, ZL1AMO, was to leave New Zealand on November 14 for Western Samoa, where he was to operate as 5W1CW for three days. Then three days later he was to be active from ZK3. He will be there at least one month. He will be active on all bands, 160-10, on CW and SSB. QSL via ZL1AMO.

3XOHAB, Guinea
Op. Dieter has been active on 40-10 meters SSB and CW. He is leaving 3X in mid-December to return to Germany. The flurry of CW activity on 80-10 meters several weeks ago was by Dieter's QSL manager, DL8CM.

5A7AC, Lybia
has been reported on 7007 at 0130Z. The operator asked for QSL via DK9KD.

5H3CR, Tanzania
Op. Rino has been very active on 20 meter SSB. Look for him near 14195 at 1900Z. QSL via POB 2004, Mwanza, Tanzania.

5T5SR, Mauritania
Steve is very active on 20 and 15 meter SSB with some CW activity. He was a former operator of KC4USN and his Stateside call is WB4WZM. Steve has one more year of duty in 5T5 land. Steve also states that he will not work nets or list operations. QSL via N4GNR.

7O, Yemen
Alain has departed from Yemen until

mid- December. He states that when he returns, he will work everyone. I don't think he worked any U.S. stations on his last visit to 70. Guess we will have to wait and hope he keeps his promise.

7P8, Lesotho

Lloyd and Iris have operated from ZS and ZS3, and their next planned stop is 7P8. They will be active on all bands, 80-10 on SSB and CW. QSL via YASME.

9J2BO, Zambia

If you need this one on 80 and 40 meter CW, Brian can be found on Snooky's Net on 1900Z, where Brian will arrange a sked with you. QSL via W6ORD.

DX TIDBITS

IARU has decided to rename the IARU Radiosport contest to IARU HF Championship. The new rules allow 24 hours of operating out of 48 with a bonus of working the various headquarters stations of the IARU national societies.

Congratulations to four new recipients of 5B WAZ: A71AD, LZ2CC, SM5CLE, and LZ1HA.

There is a DX net for YLs that meets on Mondays at 2030Z on 14223.

If you worked 703DX recently, scratch it, he was a slim.

N3CWD states that he received a card from VP8QG in early November. I have seen this one in many bulletins listed under QSL help. So QSL her direct via the CBA

If you need a QSL from the 9J2XZ operation in the early 70's try ZS5WT who was the operator. QSL via CBA.

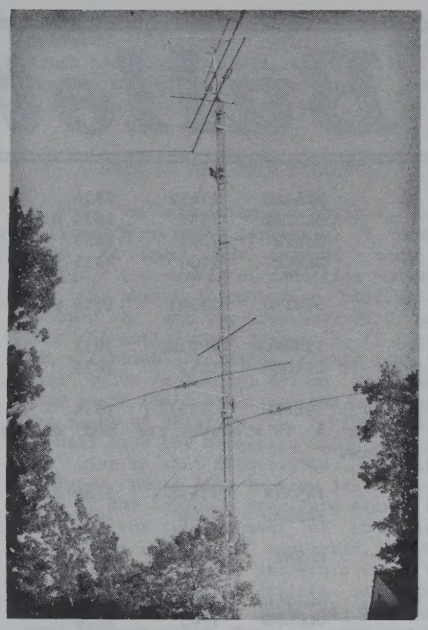
Anyone needing a card for the ET3USE operation in the mid 70's, the operator was W4LZZ who will be glad to confirm the QSO.

HAM RADIO - International Amateur Radio Exhibition - the longest running annual German Ham show combined with the 37th Lake Constance meeting of the German Amateur Radio Club (DARC) will be held on July 4 - 6, 1986 in Friedrichshafen, West Germany.
Commercial exhibits, forums, meetings and contests fill this three day premier European ham radio event.

Several DX stations have told me that the strongest station they have heard on 160 meters was NOXA. Send me a picture and description of your antenna Fred, so I can put it in the bulletin.

VK0GC has departed from Macquarie and probably will not return in his next tour of duty.

To make this column as informative as possible, I need input from RADIOSPORTING readers. In addition to the IRSA net frequencies and times I will also be on 14.250 MHz at 2300Z Tuesday evenings and 3.830 MHz at 0200Z Friday mornings. Also, information can be sent to me at my home address and I will reimburse your postage costs if you wish. Thank you for your help.



Bob Hardy, K2IGW from Grand Island, NY enjoys working DX and contesting. His good signal can be attributed to this loaded 120 foot tower. Starting from the top, there are - 3 el. duobander for 10 and 15 meters, 5 el. Telrex for 20 m, 3 el. Telrex for 40 m. Half way up the tower are 4 el. 15 m beam, 2 el. 10 MHz beam and 4 el. 10 m monobander.

QSL INFO

CEØ ZIG; J.Herrera, Airport Mataveri, Easter Is
DK7AH; R. Juenemann, Haydnstr 9, D-3352 Einbeck 1
G3OKQ; J Russell, Greenfingers, Oyster Ln, Byfleet, Weybridge, Surrey
G4CWL; B.Fletcher, Elstead Hammersley Ln, Tylers Green, Penn, Bucks HP10 8HG
HB9APJ; H.Strickler, Freistr, CH-8805 Richterswill
HB9ASJ; L.Spreitzer, Hopfernstr 4, CH-4900 Langenthal
HSØ A; P.O.Box 2008, Bangkok
I1FOU; A.Foglia, Via Novara 62, 1-28024 Gozzano
I2MQP; P.Mario Ambrosi, Via A Stradella 13 1-20129 Milano
J28EI; P.O.Box 2147, Djibouti
KC6JC; J.Cavanagh, Catholic Mission Metalanim, Ponape, ECI 96941
KG6IP; T.R.Mason, P.O.Box 481 CULVER CITY, CA 90232
KX6DS; D.Sublette, North Alabama DX Club, Box 4536, Huntsville, AL 35815
N3QA; C.Coursey, 903 May Ln, Stevensville, MD 21666
OH2BH; M.Laine, Nuottaniementie 10 D 20, SF-02230 Espoo 23
ON7IP; S.Piedfort Kloosterstraat 49, B-2452 Gierle, AN
VK2BCH; R.Crosby Jr, Box 344, Forster 2428
W4HET; P.Schmid, POB 939, Vienna, VA 22180
YU3PR; R.Kasca, Studentovska 1, 65280 Idrija
Z21FN; R.Franklin, 44 Mc Nielage Rd, Harare
3D6BQ; G.Gillet, Box 780, Mbabane
6T2MG; P.O.Box 49, Khartoum
7P8CM; M.Broadway, Box 949, Maseru 100
8AØ PPI; P.O.Box 96, Jakarta, Indonesia

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QSL INFORMATION

A35SA JM1MGP, A. Asahina, 23-5-310 Seki Minami 2, Nerima-ku, Tokyo 177, Japan
C30LAZ EA3DDP, F. Panades, San Magin 11, Igualada, Barcelona, Spain
CE9AJ CE3AA, Radio Club Chile, Box 13630, Santiago Chile
EL2AL KW9Z, D. Naples, P.O.Box 716, Notre Dam, IN. 46556, USA
FY7GA N6ZV, D. Jones, 1349 Winchester, Glendale, CA. 91202, USA
GJ0AAA G3TXF, N. Cawthorne, Holt Cottage, Kingston Hill, Kingston on Thames, Surrey KT2 7JH, England
J73LC KF4IL, G. Marsh, 157 Julia Dr, Milton, FL. 32570, USA
KC4AAC W6MAB, J. Stagnaro, 2305 Panorama Dr, la Crescenta, CA. 91214, USA
KD7P/KH2 KS7L, P. Forman, 4514 76 th St SW, Mukilteo, WA. 98275, USA
PY0FF PY2AJK, A. Kittler, Porot Elizabeth 149, Interlagos, 04783 Box 273, 01000 Sao Paulo Brazil
PY0FR PY2AJK
PZ5ES N8DE, D. Havlicek, RR 6 Box 526, Connersville, IN. 47331, USA
VK0YL VK3AH, K. Lachlan, Box 39, Mooroolbark 3138, Victoria, Australia
VP2MLD WB2LCH, G. Ege, P.O.Box 64, Gloucester, NJ. 08030, USA
VQ9YR KA4SPA, L. Funk, 22 Crooked Branch Rd, Lecanto, FL. 32661, USA
XU1SS A1HQG. Y. Arisaka, 1107 Zaimokuza, Kamakuracity, Kanagawa, Japan
ZF2AG N8AG, A. Geyer, 860 South Main Str, Milford, MI.48042, USA
ZS3E K8EFS, M. Anderson, Box 54 R4S, S. Cochran, Charlotte, MI. 48813, USA
1A0KM I0MGM, M. Gallavotti, via Cassia 929, I-00189 Roma, Italy
3A4LF 3A2LF, C. Passet, 7 Rue de la Turbie, MC-98000 Monte Carlo, Monaco
3D6AA KB5DQ, P.Ridley, Star Route 7 Box 43c, Belen, NM. 87002, USA
5H3HM E5VJ, H. Gillivray, 1513 East Heights, Saskatoon, Saskatchewan S7J 3B4, Canada
5L2CW WB2GMU, M. Gussow, 39 Scotchpine Dr, Medford, NY. 11763, USA
5N8FOC K6EDV, L. Peterson, 845 Romana Dr, Santa Rosa, CA. 95404, USA
6Y5DA VE4JK, J. Knowles, Box 365, Carman, Manitoba ROG OJO, Canada
8P6J WA6OTU, M. Beckwith, 829 N First St, Alhambra, CA. 91801, USA
8P6CW WA6OTU
9K2DX WA6OTU
9Q5MA K1VSK, D. Berger, 25 Scarborough Rd, Cumberland, RI. 02864, USA
9U5JB ON5NT, G. Penny, Lindestraat 46, B-9880 Aalter, Belgium

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D44IS	EA5EBT
FM5WS	Box 635, Martinique
HL1LW	JRØKVU
HSØIYY	JA8ATG
JY4MB	DJ3HJ
JY5US	DJ3HJ
JY9RA	DL8RA
KC2OU/V2A	OE3NH
KP4BZ	KZØC
P4ØGP	K8JRK
VK9NM/LH	DJ5CQ
V85TT	T.B. Lampoh, RHQ Signal Troop, RBMR, Berakas Camp, Brunei
YBØARA	WA6AHF

160 m Bulletin

Founder - Stu Perry, W1BB

160 m DX News

Wally Stefanoff, LZ2CJ

PO Box 73, Levski, Bulgaria

Here we are again with more information on what has happened on 160 meter band lately, the activity report from the 160 meter DX information net which is regularly held on Saturdays, 1400Z - 14.337 MHz, and who was on the band during the big 1985 CQ WW DX SSB. All stations operated CW unless marked otherwise.

USSR - European Part

UA1-6	RV6AC	2136Z	1834 kHz
	UA3UO	2140	1833
	UA3QVE	2140	1832
	RA3DOX	2050	1833
	UA3PFN	1950	1833
	RA4CIW	1705	1839
	UA6YFT	1705	1839
	UA1WDJ	1830	1835
	UA4HBW	1835	1833
	UA4WEM	1835	1833
	UV6HEK	1850	1833

UT5 UT5AB - A1 is operating with a 1/4 wave slooper antenna and a UW3DI transceiver! He is active around 1833 - 1835 2200Z and 0400Z.

	UT5TBI	1906Z	1832
UA2F	UA2FF	1920Z	1835
	UZ2FWA	1900	1837
	UA2FFA	2126	1834
UC2	UC2ODI	1935Z	1841
	UC2WCJ	2050	1838
UR2'	UR2RKQ	2050Z	1841

Rest of Europe

SV	SV1PL	2055Z	1836
	SV1OK	2130	1837
G	G3AAQ	2127Z	1835
	G3BDQ	2140	1832
	G3XWZ	2150	1831
	G4VRX	2155	1835
GM	GM3TWA	2209Z	1832

The most active stations on 160 meters from UK are: G3SZA, G3PQA, G3RBP, G3RPB, G3XWZ, GW3YDX, GI3OQR, GD4BEG, GM3TWA, GU3HFN, GJ2LU, etc.

SM - (allowed CW only)

	SM6BJI	2220Z	1834
	SM5EDX	1840	1832
	SM7BIC	1700	1832
	SM4CMG	2212	1841
DL	DL6RBH	2145Z	1826
	DL5LAE	2155	1835 SSB
	DJ8FW	1701	1833
	DL9KR	2100	1835 SSB
SP	SP5INQ	2100Z	1835 SSB
I	IY9OFGM	1852Z	1837
	IK1DQK	1852	1834

OZ OZ7BW 2137Z 1835 - is running a 10 W output rig and dipole antenna.

PA	PAØHIP	2145Z	1840 SSB
	PAØDBD	2200	1835 SSB
OH	OH5NZ	1905Z	1837
OK	OL1BLR	1703Z	1836
	OLØCRG	1703	1836
	OK2BDR	2203	1833

ASIA

UL7	RL7FER	2215Z	1844
UA9	UA9YJD	2221Z	1834
	RA9CTW	1905	1830
	UZ9OWK	1955	1847
	RA9AKM	1955	1835
	UA9SEX	1835	1834
	UA9MBX	1851	1833

RA9AKM, Mike has a very good signal. He is usually active around 1830-1835 kHz between 1330-1400Z and 0200-0300Z on weekends.

JT	JTØAPE	2200Z	1833
	QSL via UZ3AZO		
UG6	UG6GAW	2300Z	1833-1835

Kavlan is active almost every night using a UW3DI transceiver and a 90 degree folded dipole 30 meters high, plus an inverted vertical made of wire.

4X	4X6AW	2100Z	1835
	4X4OA	2200	1837 SSB
9M2	9M2AX	2309Z	1833
UM8	UM8MEE	1905Z	1830
UF6	UF6FBE	1905Z	1830
	RF6FIK	1930	1865 SSB
	RF6FII	1930	1865 SSB

OCEANIA

KG6DX	1339Z	1835	
	9M2AX	1400	1832
	KH6AT	1400	1832

Also reported active on 160 m: H44IA, KX6DS and P29JS.

AFRICA

TR	TR8JLD	0005	
	TR8JLD	0035	SSB

QSL to P.O. Box 484, Libreville

TR8DR reported active on top band. QSL via W2PD.

9J2	9J2JN	0340Z	1837

QSL via P.O. Box 30222, Lusaka

CQ WW DX PHONE - 1985
ADDITIONAL NOTES

Conditions were either better or worse than in last year's running, depending on the point of view one takes. Static level was very high both nights here at my QTH, sometimes 20 dB over 9. During the whole contest the European signals were strangely attenuated. Usually most of the Soviet stations (UB5s, UA1-6s) come through about 57 - 58 but during the contest their signals were only about 55 - 56, sometimes down to 54. The same strange attenuation was observed for the rest of the European signals. The high QRN level made the reception really challenging. On the other hand, when the time for the opening to other DX areas came, the band was surprisingly lively and the DX signals were coming through nicely in spite of heavy QRN. The exception was the South America and Caribbean.

I had a nice US/VE opening the first morning between 0420 - 0452Z and worked 17 US stations, and one VE: W2HCW, N2AA, AA1K, W3BGN, K1ZM, K5UR, W1FV, K4UTE, K4DY, W1ZK, W3LPL, N4CC, W3YOZ, K1MEM, K1VR, W3GM, K1GQ and VE1BNN.

W2HCW and AA1K were readable long before the contest started (2230Z). The strongest signals were W2HCW, N2AA, N4CC. A special thanks to K5UR for breaking through the East Coast curtain and giving me a nice multiplier.

I also worked OH1RY/C56 on SSB 2225Z and later in the contest at 0101Z. USSR stations were not as active as last year, but all USSR "countries" were available except the usual Franz Joseph Land and Karelia. Skeds helped me to work UJ8 and UI8.

One of the biggest surprises during the contest was to be called by TA1C while I was working USSR in Russian. He is running a FT101ZD (10 W out on 160 m) with an 80 m dipole as an antenna on 160. Later he has also worked Riki, K7NJ/4X.

It was a pleasant surprise to see my friend Mohamed, JY4MB, active during the contest. The same goes for ZC4ASB and 5B4LP. My letter to Dany, J28EI, was sent too late to reach him before the contest, but it seems that ESP got the message to him and he was welcome multiplier with a good loud signal.

Mike, VK6HD came on like a clock, exactly at 2120Z as he did for the last two years with a signal of 55 - 57.

When the contest was over, I realized that I did not beat my last year's European record in spite of working 64 countries and 15 zones. The QRN, lower USSR activity and 3 a hour blackout period reduced the number of contacts worked to 1039. This appeared to be not enough to claim more than 93536 points as a final score on 160 meters from LZ2CJ.

I am trying to get some information from other contesters - 4X4NJ, G3SZA, IO4YSS, IKOBYO, etc. 73, Wally

(We have learned that Wally had a car accident. Fortunately no serious injuries, just a lot of twisted sheet metal. We wish him a speedy recovery.)

Top Band News Americas

Dennis Peterson, N7CKD
4248 A Street SE, Space #609,
Auburn, WA 98002, Phone: (206) 833-7243.

A SPECIAL THANK YOU

I would like to take this time and say: "THANK YOU, EACH AND EVERYONE OF YOU." This message is to all of you who were subscribers to "The West Coast 160 Bulletin" over a period of 3 years. I didn't get an opportunity to make mention of the merger with RADIOSPORTING Magazine in the last issue of the bulletin. This was due to the fact that the bulletin had already been printed and mailed when the offer to merge was made and accepted. I sincerely hope to be able to provide you with the type of information and DX News that was present in the bulletin, except now in a more broader sense with some photographs to accompany the articles and antenna descriptions. In order to provide you with this information, I need your input and cooperation to make this column and the magazine a success. Some of you may or may not remember my REQUESTS for information in the bulletin. I am REQUESTING again here for the benefit of all the readers of this magazine. Your notes, comments, short stories, scribbled diagrams and schematics, as well as news from other sources are as useful and important as reading this magazine. Please do your part by sending information, short stories, DX information, New Country Frequency Status, antenna design and installation to my address.

Thanks again to all of you who supported me through those 3 years with "The West Coast 160 Bulletin." I would also like to remind all of you, that I still have available copies of my "World Top-Band Frequency Allocations Listing." This gives you at a glance, a listing of over 240 plus countries in alphabetical prefix order, who have 160 meter operating privileges on both CW and SSB.

This list is computerized on a Commodore 64 computer and is also updated monthly to keep the records current and up to date. The listing contains a 4 separate columns as follows: Alphabetical Prefix, Country Name according to Prefix, CW frequency allocations and SSB frequency allocations. If the prefix and/or country was left blank in the CW/SSB columns, then it is because these countries do not have, or I have not received any information pertaining to their frequency limitations. The cost for this Top-Band Aide is as follows: USA/US Possessions, Canada and Mexico (US Funds) mailed First Class. All Overseas (European, African, Asian, South American, Oceania, etc.) $7.50 (US Funds) mailed Air Mail. Order yours today. You won't be sorry you did.

WHAT IS YOUR DXCC STATUS?

This is something new which I hope will catch on quite favorably. I would like to know your current country status, the number of countries worked and the number of countries confirmed, whether or not you have made DXCC and what the certificate number is. If I can get a favorable response to this idea, I will write a special column and list each month those operators who have made the ranks of DXing on 160. Periodically, I will make the necessary updates when you give me that information. I think everyone would like to know just where some of the top-band operators stand as far as the total number of countries they have worked is concerned. Maybe even mentioning that you would like to get in touch with a certain area for completion of WAZ or just to increase your country count. Here's a good way to help encourage that possible schedule with a specific country that you need, let him know what you need and wait for his reply. Let the magazine help your needs for top-band activity.

TOP-BAND ANTENNA MANUFACTURERS

In a recent issue of the past 160 bulletin, I made mention of several antenna manufacturers who commercially produce ready made vertical and various wire dipole antennas for those who desire not to construct or build their own. Now, keep in mind that those mentioned or included here are only those that I am currently aware of and have knowledge to their product via correspondence etc. There have been several others not mentioned previously that have been brought to my attention. Therefore, with a wider scope of readers in RADIOSPORTING, and possibly new operators desiring how to get on Top-Band with an antenna already available; I thought it most appropriate to provide a listing of those manufacturers again, but with the addition of some new ones.

1. Butternut Electronics/vertical
2. Col Atch Co/vertical
3. KLM/vertical
4. Hy-Gain/tower vertical
5. Gotham Antennas/vertical
6. Dentron/all band dipole
7. B & W/all band traped dipole
8. Alpha-Delta/twin sloper dipoles
9. AMP Supply/G5RV all band dipole
10. Wavemaker Products/vertical
11. Discage/wire cage antenna
12. Western Electronics/slopers
13. Sultronics/duo & tri-band slopers
14. W9INN Antennas/slopers

The addresses have been left out due to some space limitations at this time. If you have trouble finding any of these manufacturers and their addresses, drop me, N7CKD, an SASE and I'll be glad to furnish you with the appropriate address or a list of most of those which I have on file. I hope this list will be of use and help to primarily the newcomers to 160, but it just might benefit some of you "Old Timers" of top-band as well. See you all on 160/1.835 kHz.

CQ WW DX CW TEST
Single Band 1.8 MHz

Here it is, the afternoon of the 24th of November and the CQ WW DX Contest is all but under everyone's belt. Conditions from this location seemed to be quite favorable as far as operating single band 1.8 MHz was concerned. There didn't appear to be nearly as many operators operating 160 this year as last year, so I assume that most were on the other more active bands trying to acquire some of those more rare zones for multiplier credit. As I wasn't exactly a participant for competition purposes, I did get in there and worked what I could hear on the bands despite some of the QRM and extremely strong local and West Coast Stations. Going over the log sheet, I find that I had 50 QSOs, 8 zones and 9 countries worked. The following list is an example of some of the East Coast Stations and DX stations worked and/or heard during the test. After the call sign in parentheses will be the letter H which stands for heard, or the letter W which stands for worked followed by the signal report.

AA1K(W)599 * KS8S(W)599 * VG5UF(W)599
KH6CC(W)599* 4V2C(W)599 * K4LTA(W)599
K1ZM(W)599 * YV5TK(h)589* YU7BC(h)439
V2A (W)559 * YV3AGT(W)459*VE3INQ(W)599
VG1ASJ(W)599*LZ2CJ(W)439* KT3M(W)599
UP7A(h)589 * OA4ZV(h)339* OH1XX(h)439
YU4YA(h)449* XE2A(h)439 * KP2J(h)339
VE2FYR(W)599*KL7G(W)599 * VE6AQI(W)599
CYOSAB(W)599*KX6DS(W)579* K1XM(W)459
K1MEM(W)599* K5UR(W)599 * N9MM(W)599

There were others as well, in fact, I was called by a DX station in Zone 10 and given a report of 57910 but he never gave his call. I tried desperately several times to get his attention, but to no avail. I wonder who he is? Guess I'll never find out. Anyway, maybe this will give some of you an idea as to your signal strength on the West Coast. How about an East Coast/European report for the West Coast Stations?

THE TOWER ANTENNA

As most of you know by now, the antenna is one of the most important pieces of equipment at the radio station. There are several known ways of getting some additional mileage on low bands out of that tower that is just sitting there supporting the tribander or several monoband beams. Probably the most effective of all, would be the tower that has a monoband beam antennas. The reason behind this is the large amount of capacitive top loading which is present with the multitude of antennas over a single tri-bander. Generally speaking, a tri-band beam antennas exhibit considerable added capacity on top of the tower, and should provide exceptionally good results. Many times I have heard operators claim that they could not get on 160 meters because they just didn't have the room to erect such an enormous antenna. Yet, they have a 50', 65', 75', and even 90' towers with some sort of beam or quad antenna on top of it. Many operators immediately look at this situation in despair because the tower is sitting in about 3 cubic yards or more of concrete.

Because it is grounded, they give up the idea of using this ready made vertical as an effective radiator on top-band. Granted it might not be a full quarter-wave or for that matter not even an eighth-wave. With the beam or quad antenna on top they provide capacitive loading and obtain the desired matching on 160. The method of putting this type of antenna to work is called shunt feeding. There's no magic associated with the shunt feed method. It is nothing new or mysterious. The misconception that only the resonant antenna will radiate efficiently is believed by many operators. (The resonant lengths are important when using parasitic arrays such a Yagi, and tuning is very critical. When using "force" fed antennas, the antenna length effects the radiation pattern and angle of radiation. VE3BMV)

We all know and understand the fact that it is easier to feed RF Energy into a resonant antenna. It does offer a slight edge in radiation efficiency. However, non-resonant antennas will do a reasonable job as well. [QUESTION]: Are the following antennas resonant antennas? A rhombic, discone, discage, or even a Beverage. Talk to one of the following operators who uses either of the above antennas: Otto, W5YU uses a rhombic; John, W1FV uses verticals; Larry, N7DF uses a discage; Vic, W1WCR uses beverages of various types and styles. There are other users and experimenters as well, these are only a thimble full for your quick references. So, let's forget about all of these misconceptions and disbeliefs as far as getting a tower to radiate properly. Let's try to put together the idea of making the tower work for you on 160.

First of all, with grounded tower we know that we will have to have a good ground system. Sometimes this is not possible as the antenna is sitting right close to the property line and it is out of the question to lay radials on top of, or even under the surface of the neighbors' lawn. With the ideal situation usually not within our grasps, we have to do the next best thing. There's a high concentration of ground current near the base of the tower; so why not give these currents an opportunity to travel through a low-resistance path? Ground to anything/everything metallic or conductive in the area that lies in the field of the antenna to be. If need be, drive several 8-10' ground rods into the surface. Remember, these ground rods only make contact with the RF that is traveling deep within the high-resistance earth. What you are trying to achieve is to intercept that RF with a return system before it gives up its valuable power to warming the earthworms with high I square R losses.

At this stage of the antenna game you want to keep those losses very low. It is important to put out as many as possible short and long radial wires to help intercept this RF. This can be done by burying them under the surface or simply laying them on top of the ground. It is best to use insulated wire in either case to help preserve the longevity of the wire with reference to inclement weather conditions. I feel that if you really want to optimize your antenna system and to hide those unsightly wires you can install a wire screen of chicken-wire mesh. I use 1" mesh rather than 2", because it holds its shape better and will lay where you place it. You will have to do something about holding it down permanently at various places within its perimeter. I found that the best way of doing this was to go to a welding shop and ask them for all of their throw away welding stubs which usually range in length about 3 to 4 inches and when bent into a U-shaped form, they make an excellent clip for holding the mesh in place. These shops will usually give you anywhere from 10 to 15 pounds just for the asking. Before you lay this screen down, it is advisable first to cut the grass fairly short so that the screen will lay almost perfectly flat. Then anchor and attach these clips to one end of screen and begin to lightly stretch the screen as you place these clips in place. This will help to hold it taught and keep it from gathering and puckering in the middle. When this is completed, turn the water sprinkler on and water the whole system completely on a daily basis to get the grass to grow quicker and evenly through the screen. It will aid in the holding power of the clips in keeping it tight and secure. This will also help to hide the chicken-wire laying in your back yard. Once the grass gets a good start after that initial cutting, you can't see the wire anymore. Only you know that it is there.

I have made a comparison in several ways of wire radials versus the wire-mesh screen and have found the following figures and results. With the use of 180 short radial wires ranging anywhere from 35' to 65', plus 8 each---126' radial wires; and running 100 watts, my signal strength averaged anywhere from S7-S9 out to a distance of about 850 miles. After the clean-up of the wire system and the installation of the wire-mesh screen, (the first screen was only that of a 35' square; now it is 55' square system) I have found that I could actually reduce my power level to 40 watts output and achieve almost the same signal strength reports from the same stations. In some instances, I was even given reports of S9 + 5,10, 15 and occasionally a 20 dB over S9 report. Most of these test were conducted during the summer months and early spring when QRM levels are at their peak. Many stations couldn't believe that I was running only about 40 watts.

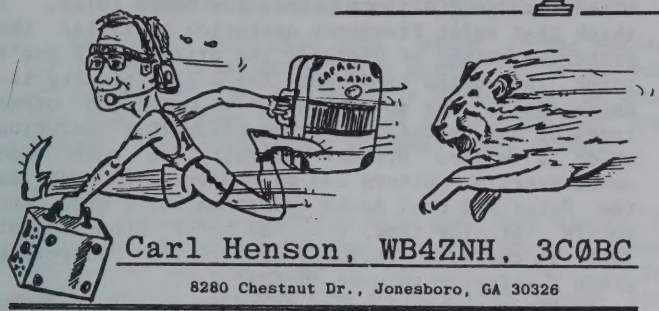
Now for the real figures of this system. If you take 50 quarter-wave radials and space them carefully around the base of the antenna and secure them either above or below ground, you will end up with the following: A quarter-wave on 1.850 is equal to 234/f MHz, which is 234/1.850 and equals 126.4 feet. Now if you multiply 126.4 x 50, you will get 126.4 x 50 = 6,320 total feet of wire being used to intercept that rf. This is just a little more than a mile and a quarter. Now, for figuring the total amount of wire present in the wire-mesh screen; I used the following calculations: in a one foot square of the screen, there is 24 feet of wire present. So, for a 55 foot square section we will find the following: 55 x 55 = 3,025 square feet x 24' = 72,600 total feet. More wire is being used for the same reason and purpose as above but with more surface area for interception of RF and improved efficiency. As you can probably see from these figures, there is over 13.75 miles of wire being used as compared to only a little over one mile with the previous method. Which method would you tend to lean towards if you were to try to achieve the optimum and most effective system? Keep in mind that I am speaking in reference to my existing 80 foot modified Butternut HF6V vertical using the wire-mesh screen ground system, but if it works for me with what I've got, you can just about guess what it will do for you and your situation. As compared to the 50 individual radials, percentage figure is only 8.5% over a 55'square wire-mesh screen. A substantial difference overall and even a greater difference when it comes to operating efficiency.

Now, I don't want to swell into great depths on the ground system; but without it we are DEAD IN THE WATER. As for the shunt feeding the 40 to 65 foot tower; your tap point is going to be near or at the very top of the tower for the simple reason that the tower is nowhere close to a quarter-wave vertical. Therefore, we must attach the shunt-wire near the top and spaced away from the tower anywhere from 12" to 30". You will have to experiment with the spacing to achieve the desirable bandwidth and resonant point. Yes, it means a lot of cut and try tests, but who said 160 was a simple band to operate?

We all know and realize that there are numerous challenges waiting for someone to try and overcome on 160 m band, so where else can one expect to deal with the almost impossible? As for the series capacitor, this too is a little bit of game playing. You may want to start with somewhere around 150 pF with a high voltage rating if you are going to be running high power; and work your way up to as high as 2000 pF. By careful adjustment of this capacitor you can tune the antenna to resonance very nicely. Use the SWR bridge as an indicator. This adjustment can seem quite tedious and critical especially, if you have the capacitor hanging from the tower or mast section. A simple way is to house the capacitor in a weather tight enclosure with markings on the outside for adjustment purposes. Thus allowing you to leave the matching unit outside, close to the base of the antenna. This method, as described above is not the only way of obtaining a reasonable match for the tower. This one just happens to be the one with which I had the best luck with when I was living in Illinois (ex WB9YTT). Remember this: One man's luck could be another man's nightmare. That's why I like to accumulate many ideas, and then from these, put together a plan of attack that will suit my needs and particular conditions.

If there are enough readers interested in learning more about the SHUNT-FED TOWER antenna system, I would like to invite those of you who have or are using such an antenna to drop me a line and describe your system; thus allowing me to write an article for the magazine. If you have black/white or color photos to include with your antenna system, please include them as well so that we may reproduce them here in the magazine. In a future issue, I will try to have several different systems for comparison and for those of you contemplating the idea, maybe one of them will suit your needs.
(N7CKD)

DXpeditioning



Carl Henson, WB4ZNH, 3CØBC

8280 Chestnut Dr., Jonesboro, GA 30326

Dear Carl,

Received your note concerning "list" operations. I have been hamming for a lot of years now and have seen many changes, some of which I oppose, even though they don't affect me directly.

I became an avid DXer only during the past two years even though I was active on CW from Midway Island, off and on from 1958 through 1961.

I do share your concern about list operations, if for no other reason than the element of fair play. I have listened to several list operations, some seemed legitimate, at least on the surface, with the list taker NOT prompting the U.S. station with his report, while other lists resulted in the U.S. station receiving his report from the list taker or someone else besides the station he was trying to work! I have never participated in such things and most certainly never will. I enjoy our hobby and take pride in flying solo. I earn every QSL card received. However, I don't know what could be done to control such activity. Perhaps your suggestions are practical, but I really doubt they would be effective. The logistics of trying to manage such things seem almost impossible to me. I suppose that some effort, even if in words only, are better than not trying.

There are other equally as offensive problems in DXing which you did not address at all. For example, how about the "DXer" that just sends QSLs without working anyone? I am sure you keep good records, but I fear that many DX operations do not, and respond to any cards with IRCs or greenbacks enclosed. There are always going to be unethical operators, and rule making won't alleviate those kinds of problems. (I do not feel threatened by the list takers, though some DXers feel the need to be on the Honor Roll to such an extent they cannot resist doing anything to get that new one.) Then there are the "big guns" that run many times the legal power, there are laws against that, but the beat goes on!

We can only hope that the vast majority of hams will abide by the law and the sense of fair play and sportsmanship. I will write my ARRL Director, as suggested, perhaps a little step is better than nothing.

Incidentally, Carl, I put my HW-7 on the air last week and worked 23 countries with less than 3 Watts and a Butternut vertical, so you can be sure that, to me, that is a great thrill, something I take personal pride in and feel a real sense of accomplishment. My big rig is a Ten-Tec Corsair, barefoot with the same butternut. I will be on CW with 100 Watts maximum until I become a silent key.

I wonder what your feelings are about the DXCC countries list? For example: How is Kure Island justified as a separate country? Why are Transkei and the other homelands NOT separate countries? I am opposed to apartheid, it seems the DXAC is involved in politics, and I don't believe they should be! It appears to me that if Kure should count separately then French Frigate Shoals and many others around the world should as well.

One last subject, you probably worked FOOXX and their 5 up/5 down type operation. They had 15+ kHz of band wiped out during the whole operation. I am not blaming them but 5-10 kHz splits do cause problems. What about the Hams without an outboard VFO or at least 3-5 kHz offset capabilities on their rigs? We encourage "state-of-the-art" equipment, which in turn puts the low income Ham at a disadvantage, doesn't it?

I enjoy reading Radiosporting and your articles, and I hope to CU from 3CO down the log. Keep up the good work.

With best regards, Paul

(Paul had no reasonable expectation that his letter would be published, so I elected to remove his callsign. Paul's letter was edited to shorten. I sincerely hope that I have not lost any of Paul's meaning in so doing. Carl)

Dear Paul,

I apologize for taking so long to answer your letter. I have been ultra-busy lately: trying to run for Director of the ARRL SE Division, be President of the SEDX Club, writing for Radiosporting, helping to put on DXPO ATLANTA, and another 1000 things or so it seems.

It appears that someone has been photocopying my old anti-list letter and remailing it. I still feel that my suggested change in the DXCC rules would help. However, it is obvious that the level of concern by legitimate DXers (who are NOT getting something for nothing) is out-weighed by the people who enjoy spoon-fed DX. I don't like it, but I can see the ARRL's position of not making rules in opposition to the majority of people who take the time to write and express their opinion. So, the letter-writing campaign is dead. It always surprised me how many people confused my proposal to "kick the list takers out of DXCC" with an earlier proposal to not count contacts made on a list. I think you understood the difference.

In 1979, there was a big flap about 4Z4TT telling everyone that the QSL information was "send a dollar, plus QSL and SAE to...." 4Z4TT had done this on previous DXpeditions but this was a trip to ZM7 which at that time was fairly rare. So the request suddenly got lots of attention. I was listening on 14.225, to a rude bully, when someone asked him, "Bill, are you going to have the ZM7 up?" The astounding answer was, "No! I wouldn't let anyone operate on this frequency that demands money for a QSL card!" The truth of the matter was that 4Z4TT would not have been caught dead on that list! It was easier and more face-saving to say "I don't want him" than to say "he doesn't want me!"

Like your opposition to apartheid, I certainly don't condone selling QSL cards, but when the ARRL declared QSLing as operating and threatened to expel anyone for "unethical" QSLing, I found that particularly galling since U.S. stations have the worst record of QSLing in the world! And at the time more U.S. stations were operating unethically through lists than anyone else in the world!

Sure there are many illegal and unethical things happening on the bands. My zeroing in on lists was not intended to say that the other problems don't exist, but to not muddy the water on that issue until it is resolved. You are right, we cannot legislate good manners and compliance with rules. Recently Martha's manager, N4NX, returned a $20 bill and QSL card: Sri, not in log.

As to my feeling on the DXCC list, there are many DXCC Countries which I feel are not really legitimate countries. In order to delete them, we would have to re-write the entire DXCC rules. I am NOT opposed to doing that at all, but people resist change and I don't believe it would be a popular endeavor. There might be a way but the ARRL cannot afford another riff in the ranks such as the one over incentive licensing. Unfortunately, that could have been prevented by asking the FCC to "grandfather" everyone to Extra Class that was licensed before incentive licensing. Using this same reasoning, the ARRL could announce that as of a certain date, it would accept no new DXCC applications but would continue to accept endorsements to existing DXCCs. Then applications for the NEW reformulated COKE (er, I mean DXCC) could be forwarded to a Volunteer staff which would administer the New Award under the New Rules. This should prevent the DXCC workload at Headquarters from growing any more; it would in fact very quickly get lower. This would do three things: 1) It would save the League and its members (us) money; and 2) It would give another award for those over-achievers to pursue; and 3) It would get more ARRL members involved in the day-to-day operation of the ARRL.

Kure Island, I understand, is a DXCC country because it is administered by the Department of the Interior and not the Navy as is the case of its neighbor, Midway. This is not enough alone to give Kure country status. It had to also meet the mileage requirement for separation. Any Hawaiian Island which met that mileage requirement would also count separately. ("Separate administration" rule has been removed from the DXCC rules, but countries that once qualified remain on DXCC list. Ed.)

The South African Homelands are probably more autonomous than the individual Soviet Republics, Northern Ireland, Wales, Scotland, Ile of Man, and etc. In fact, Walvis Bay clearly qualified for DXCC credit when it was submitted some years back. But on the other hand, the ARRL has more important fish to fry. WARCs in the future, just as the one in 1979, could have very profound and detrimental effects on Amateur Radio, if the Radio Societies of the world are NOT united for the purpose of influencing the many small governments which have an equal vote to the U.S.A. at WARC. The IARU is really the ARRL. If the member nations (read Radio Societies) got angry with the ARRL and pulled out of the IARU then our position of strength, as precarious as it is, might not be able to withstand the pressure. This is not the type of thing which can be undone later and restore the prior situation. The ARRL has the excuse that the U.N. does not recognize the Homelands, thereby providing the reasoning to take off the pressure from US DXers.

I had Clipperton confirmed from the previous DXpedition so I did not bother the FOOXX folks. I think that split frequency operation is by far the preferred method of handling the pile-up. I don't think that using 15-20 kHz for a rare country is unreasonable nor do I think it is unfair to other types of Ham operations. The Clipperton operation which I worked DID use entirely too much band unnecessarily. Others can be easily cited such as the Peter and Paul Rocks operation which used the entire (at the time) U.S. 20 Meter Phone band! That is correct; 14.200-14.350! The Clipperton group I referred to used 80 kHz!

On DXpeditions, I have worked many operators who were spinning the dial back and forth (because of single VFO on their rigs) to work me. While this is not easy, it is certainly not even close to impossible. I have tried it quite successfully myself from home. I also answer people calling in the pile-up, "Please answer on this frequency." I do, since it is so easy to do.

I think that the proliferation of Ham gear and the pressure for the high dollar DXer to have the latest in bells and whistles has in fact been a big help to the low income DXer. A couple of weeks ago, at a hamfest where I was showing some slides, I saw an HW-8 and P/S for $35, a Century 21 for $140, an HW-16 plus VFO for $100 and an absolutely mint FT-101B for $325. Sure there are lots of TS-940 types out there, but, if it's clean, no one can tell the difference in a $20 ERP Watt and a $2 ERP Watt! Please notice my use of Effective Radiated Power. If a DXer invested the $4000 cost of a BIG amplifier into a $1000 LEGAL amplifier and $3000 into his antennas, everyone, including that DXer, would be better off for it! 73 Carl, WB4ZNH

THE TRAVELERS CENTURY CLUB

Marty Woll, N6VI

The front page of the November 22 Wall Street Journal really caught my eye. It tells of another club in Los Angeles that requires 100 countries to join. This Club's members are concerned with Bouvet, Tristan de Cunha, and St. Pierre and Miquelon just as we are. Albania is a rare one for them too. The difference is that to count a country, they have to GO THERE! The Travelers Century Club was founded in 1954 and has as its motto "World Travel...the passport of Peace through Understanding."

A few phone calls around the country put me in touch with an active member here in Los Angeles. Sanford Smith has been to 287 of the 308 countries recognized by the TCC (they don't count places such as Kingman Reef which have no indigenous human population). This puts him in fifth place on their "Honor Roll." and now for the good news - Sanford Smith will be our (SCDXC) guest speaker at the Christmas Banquet. He will come armed with slides and stories about visiting such places as Jan Mayen. It promises to be a fascinating evening for DXers and spouses alike.

(So. CA DX Club Bulletin, December 1985)

SURPRISE YOUR FRIEND -
SUBSCRIBE *RADIOSPORTING* FOR HIM

80 METER DX

John Devoldere, ON4UN

Most DXers know that John, ON4UN, is the author of a fine book on DXing on 80 meters. It is now out of print. So, he is currently re-writing the book and hopes to have it published in both English and German for distribution in 1986. John writes:

Belgium

The 80 meter season was very good last winter. I was able to work a few new ones, which is rather difficult at this stage of the game. The total is now 318/all. It was also an excellent season for working the West Coast. I worked nearly 200 different West Coast stations, and had a few excellent openings to Alaska, which is very rare from here (the path is right across the magnetic North Pole). I did quite a bit of work on the Beverage antennas last winter and have a really good system working for me now. I can rotate across 360 degrees in a matter of seconds. Who can do that with a big mechanically rotatable array?

80 Meter Dxing From Western Europe

The winter 1984/1985 80 meter Dx season has been an outstanding one. I was able to work a few new ones and the wanted list is down to 13 needing.

Big Antennas

We have witnessed better and better antennas being put up. The record must now be with Peter, OH1RY, who has the 3 element full-size yagi up. The elements are nearly 150 feet long! It is built like a battleship, and Peter has been keeping it up for over a year now. As to the signal he produces with it, I am sure all the West Coast USA 80 meter buffs need no telling! When Ghis, ON5NT, was in 9U5 a while ago, he said Peter was almost 20 dB better than the next station in line. But there are also an increasing number of outstanding signals from the West Coast to be heard here in Europe. The most consistent are W6NLZ, AA6AA, W6RJ, W7IVX and K6NA.

My observations are essentially short path because there is hardly any long path between this part of Europe and the West Coast. Our earliest sunset in midwinter is approximately 15:45 GMT, which is quite a bit after sunrise on the West Coast, except for the Northern regions. This winter I only worked W7IVX and AA6AA on the long path (both on CW). Our friends in Eastern Europe and Scandinavia especially have sunset up to 3 hours before I do.

Strange Signal Paths

I also would like to share a few very peculiar experiences that happened to me on 80 meter this past winter. On two mornings, when the band was literally dead to North America (I was working Central and South America and the South Pacific just before my sunrise), I heard the signals from Pete, W6NLZ, with quite good strength. He was beaming to the South West. When we both tried the normal short path, there was no copy at all. My South America Beverage brought him in Q5 all the way while on the North America one he was dead. That was a typical example on how crooked paths can exist to avoid high absorption areas (in this case a deep Aurora belt, extending quite far South).

It has been my experience of almost 25 years of DXing on 80 meter that very often very-long-distance 80 meter signals do not follow the theoretical great-circle path. another very good example is how the path from Europe to ZL shifts around with the time of year. The great-circle long path direction to ZL is 230 degrees. During mid-winter (November to January) propagation always comes across North America, about 310 degrees, which is almost 90 degrees off the theoretical long path direction. The reason is that across the Southern hemisphere it is summer and the MUF is much higher than in the North. Therefore signals are much more attenuated in the South and those traveling through Northern regions prevail. Later in the year, the path will shift to Central America and around April the Path will have become genuine long path (across South America).

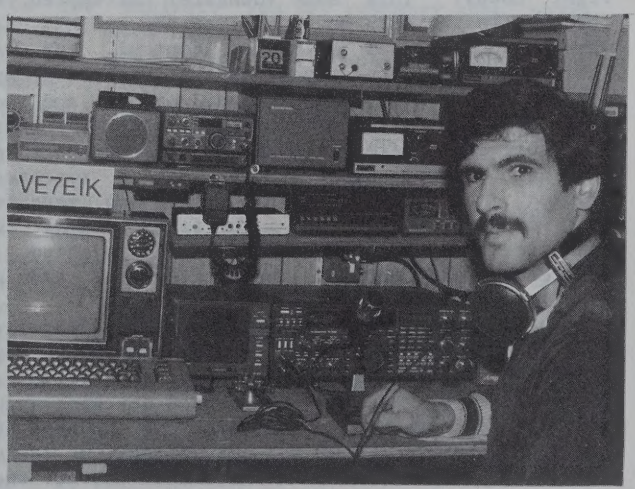
New Book

All those phenomena and experiences, together with comprehensive chapters on transmitting equipment, receivers, 80 Meter antennas and operating skills and experiences will be included in my new book on 80 meter DXing, which I am writing at this time. There will be over 500 reference works (articles) listed in the book to the largest extent on antennas. The antenna chapter will be quite extensive. I hope to have the new book out in the shops by early 1986. (NCDX Foundation Newsletter)

VISALIA CONVENTION

The 37th Annual International DX Convention will be held at the Holiday Inn at Visalia, California, on April 18, 19, and 20th, 1986. For reservations call (209-651-5000). Mark these dates on your 1986 calendar.

Plans for 1986 convention are in full swing with the group that so ably prepared it in 1984. For the new attendees this convention includes three days of meetings, cocktail parties, a beautiful banquet, and large breakfast, all for the ticket price to be announced in February. Many DXers from all over the world will be present to have an "eye-ball" QSO with you. (SCDXC)



George Furtado, VE7EIK is a keen contester from British Columbia. He is a proud owner of Kenwood TS-940S and this neat station.

WHERE IS AMATEUR RADIO HEADED ?

Pete Nissen, W4PTT

Recently I have become more and more dissatisfied with what I see happening to Amateur Radio. One needed only listen to the DX window of the 20 Meter Band to see how bad it really is. I know that playing the DX game is competitive, but when the DX station comes back and says "ONLY the Alpha Alpha Five station" about 6 times, and you hear every call district, plus a half-dozen DX stations go back to him you KNOW something is NOT RIGHT. To top that off, the vast majority of the offenders are the "Old Timers" and not the "new" amateurs with the KB4 or N4XYZ calls.

The Japanese are noted for how polite and self-disciplined they are and several years ago if you called "CQ Japan," and picked out a specific station, that would be the only station you would hear. Today they have "learned" from us "experienced" DXers on how to be rude, overbearing and obnoxious - but not to the same degree. There is ' still hope for them but I'm not sure there is for us. Just the other day I was monitoring one of the local repeaters and there was an 11 year old youngster (who, by the way, had upgraded to Technician Class last month) trying to call his father who is also a ham. One of the locals broke in over the boy and told the repeater owner that "there's that kid that's been playing with his dads radio that keeps punching up the tones." This jerk who broke in, is probably a "permanent" Technician as he could probably never learn the code to pass his General Class exams since he lacks the requisite intelligence. In all probability, if he were to be re-examined, he probably couldn't even pass the 5 WPM code test. Here we are in one breath trying to get the youth of America involved in Amateur Radio and then some idiot blatantly accuses a newly licensed operator, who was operating flawlessly, of some unfounded illegal operation. This, to me, is unthinkable. It certainly won't take much of this type of thing to make that youngster wonder if he is involved in the right hobby. This same youngster attempted to check in to the ARES Net this evening, and his call wasn't acknowledged by the net control. He was full quieting into the repeater. I heard him attempt to check in no less than 3 times, and each time his call was distinct and perfectly clear. I'm sure that there was no malice on the part of the Net Control since there were 2 repeaters "linked" and I was listening on the same repeater the youngster called on. The fact remains the youngster must have felt neglected and rejected. I interceded and advised the Net Control and hi finally was able to check in.

You can hardly pick up an Amateur Radio magazine (QST in particular) without reading something about the need to "increase the number of amateurs." Unfortunately, you will never read anything about the need for more "self discipline" or the need to "improve" the QUALITY of the current Amateur ranks. Just "get everyone licensed" no matter whether they want to be hams or not. (This equates to the greater the "numbers" - the "greater" number of subscribers/members). (Perhaps it should read the "greater" the numbers - the greater the "Dollars").

For many years I used to read the "Doom and Gloom" editorials of Wayne Green W2NSD/1, then the Editor of 73 Magazine. It seems that he was always lambasting the ARRL for something or other and at the time, I thought he was just opinionated and biased.

I try to keep an open mind and just thought perhaps Wayne Greens rumblings were just the product of "editorial privilege" and that he just wanted to be provocative. That he was, to be sure. Now I'm not so sure that some of his editorials were so far off target. (I also take advantage of "editorial privilege" and say what I wan to. If someone doesn't like what I write then they too should exercise their rights by writing a rebuttal if they want. It will be published in the Balanced Modulator and *RADIOSPORTING*.)

I was recently privileged to receive a copy of a personal letter from a very famous and I might add, knowledgeable, West Coast DXer. This letter was written to a local DXer and since these gentlemen have been friends for many years their correspondence reflected their frank and serious concern about the sad state of affairs that amateur radio is in today. I have received permission from the author, to quote excerpts from his letter, for the readers. While I must stress that these are his personal opinions I am sure that most "thinking" amateurs will agree with just about everything he says. In reviewing his letter, I checked back issues of "QST" and will show applicable references when I could find them. These will be identified with an "(Ed. Note: - - -) so you will be able to distinguish what he wrote and my comments. Excerpts from this most eloquently waxed letter are as follows:

"I sometimes wonder about the ARRL but I figure you see more of the anointed Director types than I do. You may... or may not.... remember years back ---- that the ARRL was looking for a long-range plan to downgrade DXing. The problem was that the word had come from downtown Newington and from one of a handful in on the planning. The number in on the strategy session could be counted on your fingers with a couple left over. I was entreated to be careful with the information but knowing the source I had confidence in it. Headquarters denied any such intent but not too vigorously as they must have been wondering just how much I knew. As the Directors had not been privy to the information they could honestly and stoutly deny knowledge of any such plan. But things did seem to simmer down a bit....or something like that."

"Recently, however, I have begun to wonder again. I am sure that any long range plans would not be published or even widely disseminated but such long-range strategies are not uncommon in that corporate thinking that was brought into the ARRL headquarters about six or eight years back."

"My feeling has long been that they do not understand DXing, that some think it gets too much QST space and too much accessory attention through the DXCC Desk and the awards and possibly that it

costs too much to administer. It could be the thinking that it would not be politic to publicly announce a de-emphasis on DX or to announce program cuts....but, the same goal could be gained by careful trimming, confinement and neglect. An appearance of marching forward while actually moving backward could disguise the directions." (Ed. Note - Don Search, W3AZD, said at DXPO Atlanta on 9/28/85 that he was working on DXCC applications received in July 1985 due to the leagues inability to find and hire needed help.)

"I check into a traffic net a couple of times a month. My own feeling is that traffic handling within or without the ARRL sponsorship, has long passed it's zenith. Emergency work is hardly what it was before communication gear for fire/police/emergency vehicles became common.....In this area i doubt if there is a municipal vehicle which does not have mobile equipment installed. Things have changed and one has only to remember the old Motorola taxi-cab gear that amateurs used to seek for mobile work and compare it to the gear currently available." (Ed. Note- Urban areas on the West Coast may be co-ordinated with each other but the local Northeast Florida area relies heavily on the ARES system which has proven to be not only responsive, but quite often, the only viable communications available.)

"Amateurs can hardly build their own gear these days, in simple truth the state of the art has passed beyond their abilities except in a handful of cases. Even those who might have the ability would hesitate to try to match with their own work that is available from commercial sources. Yourself, for example. You have the experience and training but are you building your own transceivers these days? If not would you attempt such an endeavor?"

"So if construction, emergency and traffic work are either in a decline or beyond current amateur capabilities, what is left? I think it is DX! But then again, I have always leaned in that direction."

"ARRL has moved to an era when multiple titles and multiple tasks are the mask of decline. Years back I would argue...and often prevail...that the number of licenses was meaningless, that usually no more than 25% of the license holders were active, the others more or less coasting. This was even more so back in those days when there was no charge for license renewals, the sharp decline that came during the period when the FCC charged fees for licenses and renewals certainly did support the feeling that many were there only because it cost so little. The extension of the license term would tend to continue a higher statistical level though it may not necessarily mean that more amateurs are active." (Ed. Note - A concerted effort by the ARRL to increase Novices resulted in 52,000 Novices on the roles in 1977 with a total amateur population of about 313,000. The 1985 FCC census is 76,337 Novices or 18.5% of the total 412,587 licenses. Ideal projection is purportedly 30% for Novices and not 18.5%. Reference Page 9, August 1977 QST and FCC Statistics for September 1985. -- The first 4 months of 1977 yielded an average of 22,000 applications a month with over 25,000 in April alone. Compare this with the 7,481 applications handled by Gettysburg during September 1985. In 1977 it took over 3 months to get a license - now less then one month. Reference page 11, July 1977 QST and Statistics for September 1985.)"

"Remember about 10 years back when the ARRL came up with the brilliant idea of shipping kits of components to African countries to increase the number of amateurs in that benighted continent? One has not heard of the results of that for years." (Ed. Note - Reference Page 9, April 1978 QST). "Or the hoopla that came when they embraced the Sister City program... and amateurs would be running phone patches night and day to engender international goodwill." (Ed. Note - Reference Page 9, February 1976 QST. I doubt if there are over a half dozen or so of the readership of this bulletin that even know the name of Jacksonville's Sister City, let alone have ever contacted it.) "One had to but go to a DX meeting and listen to one of the zealots outline the big plans to find how a thud sounds."

"My feeling has been that if one finds communications interesting, one will get into it... one way or another. If one is interested in something else, well, one will head in that direction. It's like eating escargot. One has to have a leaning in that direction. Strangely enough in the yachting magazines I have seen more of what I consider to be pertinent arguments on the value of amateur radio, for long haul cruising types, than I can find in QST. There are always boats getting prepared to depart the marina in Sausalito to head South Mexico, West to Hawaii or even further, to Nuka Hiva. N6DQN, one of the locals is currently somewhere in the South Pacific and working his way towards Australia and Perth for the American Cup races next year. In a 36' sloop....."

"Too often it seems that the arguments are directed towards the Boy Scout level. Yet statistics tend to show that the upper thirties might be a better area. Heck! you're in that bracket, does what they are recounting now thrill you and spur you to higher levels? I think that maybe there will be a lot of twists and turns before they find the right path.....or the right path finds them." (Ed. Note - See beginning page of this column regarding "We're getting older.")

"As far as I'm concerned, they should emphasize DX. That goes on forever and no one as far as I know is looking back to the great days of DXing as one does with Emergency/Traffic/Construction. DXers are always looking for better things. But then again we deserve them."

"On the subject, you may remember some years back when Dick Baldwin was General Manager that there was some intensive courses in management training. This may be as much as ten years back. I recall one edition of QST where he mentioned he was practically holding down headquarters alone as most of the staff was gone on this management foray."

"I would suspect that you also have been exposed to these enhancement programs over the years..."Managing by objective."..."establish your goals" and similar up-beat exhortations. Not that there is anything essentially wrong with such programs but at times some participants tend to substitute the endless line of axioms for their own thinking. As these are directed towards corporations generally, there always is some question as to their applicability to other efforts.....government...QST....special - interest endeavors, etc."

"I wonder at times if the goal-oriented policies that come from such seminars might be influencing thinking at downtown Newington. Thus the growth in amateur radio licenses is a constant yardstick, the

ARRL membership a critical gauge and possibly the amount of advertising in QST. After such indoctrination there are some who tend to live in a world where everything is up and there is no down."

"Amateur radio has always gone up and down....like stock market. But because IBM is down ten or twelve points from its recent highs, does one come to the conclusion that IBM is washed up? That it has fallen into the unforgiving offense of going down and not up. When you read QST you might...or am I trying to prove my own thinking.... is that they are emphasizing gadgetry and not general participation. Packet radio....it's good but how many are going to rush to embrace it? And why?: EME? No matter how simple it gets it still takes a lot of technical know-how. If one were newly-licensed.....or a possibly interested but not yet licensed neophyte, what would attract you?"

"I have long felt that the ARRL is headed down the wrong road when it seeks to deemphasize contest and DXing while pushing various other activities. Some of this thinking surfaced in other years when they editorially decried the tumult in pile-ups, the disruptions of the sacred 'rag-chewing' schedules and moved for reduction of contests. I have always felt that contests are areas where newly licensed amateurs can get both experience, participation and excitement. It does not matter what you do, you are doing something that you find exciting. Older amateurs may tend to be blase about such things, get some newer amateurs interested and they are jumping up and down. Field Day is a good example. Generally it is the new amateurs who turn out. The older ones may continue to participate but more often than not, they are the thinkers, the chroniclers of past glories and the master of ad hoc culinary triumphs."

"Getting to my elusive point, I Think what amateur radio needs is an infusion of self-confidence and pride in their accomplishments and less of elusive tampering with what has gone so well before but which does not fit into the long range growth strategies. Along the way I came to the conclusion that personnel is the most critical essential in any operation and the feeling of the personnel has to be nurtured and expanded."

(NFARS - Balanced Modulator)

(The ARRL says in it's masthead: " ...The League is noncommercial, and no one who could gain financially from the shaping of its affairs is eligible for membership on its Board." It looks like the League is more in the business of making money off hams than supporting the activities and programs. Does the above article shed some light at the actions of ARRL regarding new country status, backlog of DXCC application processing, trend to reduce the amount of DX and contest topics on the pages of QST, ignorance of DX Advisory and Contest Advisory Committees? Is the ham radio community really for numbers without quality?

While talking to many hams, I have found that quite often when there is a concern brought up with ARRL, it usually gets brushed aside. When the renewal time comes up, the envelope is full of material about what the League is doing for us.

We need the ARRL to represent us while dealing with other government and regulatory bodies, but we also need the ARRL that cares about us already active and to be sensitive to our needs and opinions. Perhaps constructive criticism and pressure via your director is the only way to keep the giant sane. Speak up! de VE3BMV)

PART OF 160 LOST!

AMATEUR RADIO has effectively lost the use of the upper half of the "Top Band." Effective December 9, 1985, non - government radiolocation becomes the primary user of the spectrum between 1900 and 2000 kHz. As of that date, amateur stations operating that spectrum are forbidden from causing "harmful interference" to radiolocation services, and any interference to amateur communications from radiolocation operations must be tolerated by hams. While the ARRL had put up a valiant struggle to try and keep the entire 160 meter band amateur spectrum, the FCC made the status reassignment in anticipation of the proposed future expansion of the regular medium wave broadcast band up to which operate above the broadcast band in the 1605-1705 kHz range. While the Commission will not accept applications from current 1605-1705 kHz radiolocation stations to move into the new 160 meter allocation until July, 1987, hams using 160 may soon find spread spectrum locators operating in band. Such stations may become operational as early as December 9, 1985, and will afford hams a good idea of whether commercial spread spectrum and fixed channel services can co-exist with variable frequency ham transmissions. (Westlink Report)

HAMVENTION BANQUET

ROY NEAL, K6DUE, will be the featured banquet speaker at the 1986 Dayton Hamvention. This marks the third trip to the Dayton rostrum for the West Coast NBC Network News Deputy Bureau Chief, matching that of noted humorist/actor Jean Shepherd, K2ORS. Neal revealed that he had been invited back to Dayton while emceeing the recent Octobervention gathering in Las Vegas, Nevada. Roy is expected to talk about manned amateur radio in space and other topics. The 1986 Hamvention takes place in April 25-27 at the Hara Arena in Dayton, Ohio. The Grand Awards Banquet will be held Saturday evening the 26th. Pre-registration tickets for Hamvention '86 go on sale after January 1, 1986. Ticket requests postmarked prior to that date will be returned unprocessed. you can, however, request lodging at this time by contacting the Dayton Hamvention Housing Authority, 1880 Kettering Tower, Dayton, OH 45423 - 1880, (513) 223-2612.

YAESU PROMOTES N6JFD

Yaesu Electronics Corporation is pleased to announce the appointment of Michael Henderson, N6JFD, as U. S. National Sales Manager for Amateur Radio Products.

Under the direction of Chip Margelli, K7JA, Vice President for Amateur Products, Mr. Henderson is responsible for management of dealer programs, as well as Yaesu's promotion of the growth of Amateur Radio in The United States.

Mr. Henderson has been active in Amateur Radio for nineteen years, and involved in communications marketing for the past seven. He has experience as a manufacturer's representative for General Electric Communications, as an industrial and education communications consultant, and as National Sales Manager for Yaesu's Land Mobile Division.

AN OPEN LETTER:

Dave Kennedy, N4SU

TO ALL 160 METER HAMS

This is an open letter to all 160 meter hams, particularly those who prefer to use SSB for rag-chewing below 1840 kHz:

As you may know, the 160 meter band has evolved over the past few years from a "gentlemen's" band to a band in which open war often breaks out, most often in the 1830 to 1840 kHz portion of the band. More specifically, the conflicts are usually between loud SSB rag chewers and loud CW DXers trying to hear extremely weak CW or SSB DX signals. Any conflict between the two modes is usually won by the SSB rag chewers unless they are politely asked to QSY and sometimes, they agree to move. More often the response is "We were here first so you can go jump --------." When this happens the CW DXer loses his cool and his DX contact.

As you have guessed by now this is being written from the view point of a long time CW DXer, so please be patient and hear me out.

Back in the 50's (or 60's?) the idea of a 160 "DX Window" between 1825 and 1830 Kc. (kHz came later) was originated by W1BB, the original Mr. 160. It was a good idea and worked fine particularly for the W1's and W2's on the east coast working Europe. The idea was that U.S. CW operators would transmit below 1810 and SSB operators would leave the "window" clear so that the weak European and other DX signals could be heard there. There was some grumbling, mostly from W8's, W9's and WO's who couldn't hear the DX, even in the "window." By and large, the idea has survived for many years and W1BB became the holder of 160 meter DXCC Certificate No. 1. Stew proved that DXCC was indeed possible on 160 and the DX rush to 160 began.

In the 60's and 70's many DXers achieved the DXCC Honor Roll on the HF bands and began looking around for other "Mt. Everests." 160 meter has become the last HF DX frontier. The thrill of working a new country on 160 exceeded the former thrills on the HF bands where 100 countries can now be worked in one weekend.

Now, let's take a look at where we are today, the 1985-86 winter season on 160 meters. Hordes of newcomers (everyone says we need more new hams) have discovered 160: Rag chewers and DXers, CW and SSB. Most manufacturers now include 160 with all the other bells and whistles on the new transceivers. Most transceiver operators on CW never know that they are not zero beat with the other station, but that is another subject. Many old and new 160 operators have discovered that the horizontal wire type antennas, which work so well on other bands, just won't cut the mustard on 160 DX. They have upgraded both their transmitting and receiving antennas. 160 meter DXCC has been achieved by over 100 DXers world wide and in every U.S. district except W7. Congratulations to the W7's who are closing in on it! The contest types have taken over with their "this is my frequency" attitude, even in between contests. Many foreign countries now allow amateur operation on 160 where it was formerly prohibited. But here is the rub. Many of these countries prohibit amateur operation below 1830 kHz. The gentlemen's agreement of 1825-1830 kHz "DX Window" is useless in trying to work these countries. Once in a while you hear a DXer in one of these countries venture to transmit in the window without identification saying "please QSX 1832," etc.

The 160 m spectrum between 1830 and 1840 has become a DXers nightmare. The SSB rag chewers, who have every legal right to be there, simply don't understand the DXers problem, or don't care. The problem has several aspects which are not easily explained to a SSB rag chewer on the frequency before it is too late for the DXer.

There are two crucial DX "time windows" for every U.S. DXer every day. These time widows occur at the local sunrise and sunset times and normally only last 15-20 minutes. These time windows move from east to west with the sun. They are extremely important propagation periods for the 160 DXer who is chasing Pacific DX at sunrise and Europe and Africa DX at sunset. This is also the one short period when long path or grey line type propagation on 160 is possible.

Here is another aspect of the problem. During all of the darkness hours in the U.S. these short sunrise/sunset time windows are occurring at some time during the night at every other QTH on earth! These short time windows, unlike any other HF band, are extremely important propagation periods for the foreign DXer and of course for the U.S. DXer who wants to work him.

I feel confident that many of the SSB rag chewers would move out of the 1830-1840 kHz DX band if they understood the situation. In fact, many of them have moved. Others don't understand the situation and resent being asked to move. There are also quite a few who do understand the situation but insist on their "legal rights."

Many 160 meter DXers, myself included, have been openly campaigning for a FCC mandated 160 CW sub-band from 1800 to 1840 kHz. We have written letters to our ARRL Directors asking them to direct such a petition to the FCC. In recent years, before the problem became so acute, the FCC brushed off two such petitions because they were submitted by individuals. Then the ARRL tried to sell a voluntary band plan. Nothing has happened except that 160 meters is now about the same as the ZOO on 75 meters. A CW sub-band was created by an FCC stroke of the pen on the new 12 meter band. 160 meter is the only HF band with no CW sub-band. Why is it so difficult to get a CW sub-band on 160 meters?

This letter supplements a previous letter I wrote on this subject on September 1, 1985. The previous letter was addressed to 160 meter DXers and copies were sent to the ARRL Directors, FCC and others. The letter proposed a FCC mandated 1800-1840 kHz CW sub-band but did not explain why the 1830-1840 kHz portions of the band is so important to the CW DXer. I hope this supplement will fill that void.

73 and DX

Dave, N4SU

THE COAX JUNGLE

Bill Orr, W6SAI

Sometimes a little knowledge is worse than none at all. I've heard a lot of plausible stories about coax cables and I know that plenty of junk coax is being sold to unsuspecting buyers. But I didn't realize what a "jungle" exists with regard to the millions of miles of coax cable sold each year to hams, the military, industry, CBers and others. The military, at least, usually knows what it gets for its money, as flexible coax cables are bought to a strict specification (MIL-17D or E). But how about the rest of us?

This all came to a head when I measured the loss of my coax transmission line running from station to antenna. According to all the published charts, my line loss at 14 MHz should be about 0.8 dB per hundred feet. My measurements, done with laboratory type instruments, showed a loss of nearly 1.35 dB. What was the problem? Was the cable growing old? Or was it inferior cable to begin with? What should be the expected life of a coax cable? Five years? Twenty years? Forever?

Why not go directly to the coax cable manufacturer? One day, I did just that. I called one of the largest cable manufacturers in the United States and spoke at length to one of the production engineers who was an expert on coax cable manufacture.

I first asked about "military specification" cable. He said that if you want the best cable, that was the type to buy, but that it was also the most expensive because of the exhaustive tests the cable must pass before it gains military approval.

My unseen friend mentioned that there were perhaps a dozen large, top-notch coax cable manufacturers in the United States and about the same number of smaller, but good manufacturers. And finally, there were numerous "garage shop" operators who made up coax on demand to any specification. "After all," he said, "a coax cable machine isn't that expensive."

Part of the cost of the cable is the exhaustive tests and inspections demanded by the military; sometimes the cost of certification exceeds the cost of manufacturing. If you don't have to meet military specifications, the costs drop sharply...especially if you use second-hand cable machinery.

Consider RG-8/U cable, which is not in military use today. (Military gear is designed for 50-ohm termination, and the old style RG-8/U and newer RG-8A/U cables were 52 ohms). "Of course if you want," said the cable company spokesman, "we'll manufacture RG-8/U or RG-8A/U to a military specification, but we've had no call for that."

RG-8/U and RG-8A/U were replaced by RG-213/U (50 ohm) cable made to MIL-C-17D or E specifications. The specifications call for an inner conductor made of seven strands of bare copper wire, each strand 0.0296 inch in diameter. The dielectric is first-grade polyethylene, with no dirt or pinholes in it. One untinned copper braid jacket is used providing greater than 90% coverage. He pointed out proudly that his particular non-military RG-8A/U had 97% coverage. The outer jacket was polyvinylchloride 11a, noncontaminating material. And the cable sold for well over 70 cents a foot in small quantities.

"What about coax that sells for about 30 cents a foot?" I asked. Well, that was a long story. Plenty of price cutting is going on, but it is possible to manufacture an inferior grade of coax that looks pleasing to the casual observer. He had seen cheap cable with less than 60% braid coverage for sale. Moreover, the size of the braid was reduced from B.S. No. 36 to B.S. No. 36.5 or B.S. No. 37. ("You can buy wire any diameter you want," he emphasized.

The next price-cutting technique is to use a less expensive jacket, such as used on the older RG-8/U cables. These jackets gradually contaminated the copper shield and he classified this old material PVC-1. He'd seen cable like this one on the he market.

Another cost-cutting step in making a cheap cable is to reduce the diameter and number of wires in the center conductor, and to also decrease the twist, or turns-per-inch, of the conductor. And finally, a low grade of polyethylene insulation can be used. Some cheap cable use all these cost-cutting techniques.

During the manufacturing process, costs could be shaved if no attention were paid to the concentricity of the cable. Letting the center conductor "wander" a bit meant that less cable was rejected in final inspection and an loder cable making machine could be used for the job.

When the cable was completed, it might look like the real thing, but losses would be higher and cable life would be shorter than that of high-quality cable, and the impedance would probably wander well away from 50 ohms.

The engineer sighed. "I think much of the cable on the ham and CB market is sub-par quality; as long as price is the determinant, that is the way it's going to be."

To summarize, he rapidly summed up his observations for me:

1. Be careful of RG8/U, RG8A/U, or RG8/U type cable. It has no controlling military specifications. RG8A/U made by a reputable manufacturer - with its name and type number on it in addition to the RG nomenclature is probably OK premium stuff.

2. Look up the specifications for the cable you intend to buy, and examine the cable before you buy it. Does it have the proper number of center strands? Is the inner dielectric uniform with no blemishes or spots? Does it have complete, or nearly complete, braid coverage? Does it have have a noncontaminating jacket? And most important of all, is it made by a known, reputable manufacturer? Be suspicious of underpriced cable because "there ain't no free lunch."

3. If you are starting out fresh, buy RG-213/U cable (50 ohms)which also has the manufacturer's name and type number on it instead of RG-8/U type cable (52 ohms). It may be nitpicking, but today's RG-213/U cable standard is 50 ohms.

It is a military-approved, properly-manufactured cable. Again, make sure it is made by a reputable manufacturer. You can then be certain the cable is what it is claimed to be and know that it has been tested.

LONG LIFE FOR YOUR COAX.

Once having bought good cable, how does the owner get maximum life from it?

1. Keep the cable off the ground and make sure

it can dry off after rain. Because modern outer jackets are slightly hygroscopic, moisture can penetrate the jacket material, reach the outer braid and cause corrosion.

2. Try to keep the cable out of direct sunlight; ultra-violet rays are damaging over time. For prolonged exposure to strong sunlight, the cable outer jacket should be a high molecular weight polyethylene with embedded carbon black (expensive).

3. Support the cable ever ten feet or less. Don't let it sag on a long run.

4. Don't let the coax cable whip around in the wind. Repeated flexing is not conducive to long cable life.

5. Seal the ends of the cable. Use type-N (waterproof) fittings instead of the cheap, plentiful PL-259 plugs. Coat the terminations with non-acid type silicone rubber sealant. ("If it smells vinegary, that indicates acetic acid in the sealant. Don't use it.")

6. Don't step on the cable or otherwise flatten it. And don't bend it around a sharp radius. The minimum recommended bend radius is equal to ten times the outer diameter of the cable. (That's about a 5-inch radius for RG-8A/U and RG-213/U.)

HOW LONG WILL IT LAST?

I'd heard it said that coax cable should be replaced every few years, so I asked my friend if that was so. He replied that all cables deteriorate at greater or lesser rates depending upon use and abuse. Cable failure occurs when one or more specifications of the cable no longer meets the needs of the user. Sometimes the impedance of the cable changes; sometimes the cable loss becomes intolerable; sometimes the velocity of propagation changes to a degree.

I told the engineer that my RG-213/U, which was about 15 years old, had increased in loss by a measurable amount over the years and asked whether I should scrap it and buy new cable.

"That's up to you," he replied. "Coax cable doesn't fall apart all at once like the One Horse Shay. Deterioration is gradual. If you don't mind the increased loss, why spend the money to replace the cable? If you require every watt, you'd better get rid of it."

"Then the story of a five-year life, or a fifteen-year life for coax is unsubstantiated?" I asked. "That's right," he replied. He said he thought the story had begun because in the past, some branches of the military had routinely junked coax cable after it had been stored for a number of years. He didn't think that was true today.

"If I were operating on 80 meters," he added, "I wouldn't worry too much about the grade of coax I had. Losses are relatively low at that frequency even on old, junky cable. At 20 meters, however, I would start to pay attention to cable loss. And at 2 meters, I would examine the coax I bought very carefully. I would measure the velocity of propagation of each section if I made matching transformers, and I would check cable loss every year or so. As you go higher in frequency, you can't be too careful!"

His parting shot was to remind me that large quantities of imported cable which have recognized U.S. markings but whose manufacturing specifications are unknown are now entering the market. "Have fun when you buy your next length of coax cable," he chided as we hung up. (Courtesy of Ham Radio Magazine and permission by W6SAI.)

SHUTTLE FLIGHT 61-A

With twin sonic booms rattling windows throughout Southern California, Mission 61 - A of the US spaceship Challenger, carrying the Spacelab D 1, the European "SAREX" amateur radio package and three European ham - astronauts, ended at 1747 UTC Wednesday, November 6.

While time for two way radio operation during the flight had been scarce, Ernst Messerschmid, DG2KM, was able to manage a pair of operating sessions, first on Thursday, October 31, and then Sunday, November 3 (both UTC).

Dr. Messerschmid made contact with hams in Germany, Great Britain, Italy, the Soviet Union and across North America.

Another aspect of the European Shuttle Amateur Radio Experiment was a propagation study conducted for the Dutch national amateur radio society "VERON" by Wubbo Ockels, PE1LFO, on Friday November 1 at 1610 UTC.

At all other times, amateur space station DPOSL was operating in its "auto record beacon mode," and the three ham astronauts logged 20 hours of uplinked signals onto microcassette. The tapes will be analyzed by the German Amateur Radio Federation (DARC) and a list of those whose signals are deciphered will be prepared and released in the near future.

Amateurs who made two way voice contact with the Spacelab, or who suspect that their signals may be among those recorded on the 20 hours of microcassettes, are advised to route their QSL cards to: D - 1 Ham in Space, DARC, Postfach 1155, Lindenalle 6. D-3507 Baunatal 1, WEst Germany.

(Thanks to Jonathan Marks G8WGN/DL, the crew at DFOVR and Radio Netherlands.) (Westlink Report)

US HAM CONTACTS D-1

Robert Wallace, W1HH, of Chelmsford, Massachusetts, appears to have earned the honor of being the first US amateur to make two way voice contact with the European Shuttle Amateur Radio Experiment (SAREX).

According the Wallace, the QSO took place on Thursday October 31 at approximately 1830 UTC. W1HH told Westlink Report that he had been listening for the beacon transmitter from DPOSL, and when he heard it, he replied to the spacecraft several times hoping that his signal would be logged onto tape.

As Wallace recounted, "After the third call, he came back to me on voice. I heard a carrier come on and realized that he was going to transmit on voice and thought I might be able to conduct a QSO....My surprise was even more intense when I discovered that he was calling me."

The QSO between Wallace and the D-1 Spacelab lasted only 2 or 3 minutes, and W1HH was unable to ascertain which of the astronauts he was talking to. (It has since been learned that during this period, Payload Specialist Ernst Messerschmid, DG2KM, was the space station operator.)

The QSO consisted of an exchange of signal reports and W1HH giving his ground location to DPOSL. Wallace said that he was elated to have been able to make the contact. He also said that the best part about the decision by the Germans to use a cross-band rather than in-band radio system is that it allowed full duplex operation. (Westlink)

VERTICAL ANTENNAS FOR THE LOW BANDS

PART 1

John Kaufmann, W1FV

Those who operated in the major contests on low bands can tell who is using antennas that work! One of those with an excellent signal is John, W1FV. His latest claimed score on 80 meters in CQ WW CW contest was: 610 contacts, 27 zones and 85 countries - a very impressive total. What's behind that dry listing? Read on. de VE3BMV

Two years ago, motivated by a move to a new location, I began exploring the potential of vertical antennas for use on the low frequencies (80 and 160 meters). In the course of designing and building my present vertical system, I have learned a lot about what it takes to make these antennas work and I would like to share some of that knowledge here. In Part I, I will confine the discussion to single-element phased vertical arrays.

Why vertical antennas?

It is well documented that vertical antennas concentrate most of their radiation at low angles which is exactly what is desired for DX work. This also proves advantageous in receiving in that high-angle stateside interference is reduced considerably - as much as 20 to 30 dB compared to a horizontal dipole. Furthermore, with a phased array, very large attenuation of signals from unwanted directions is possible. To achieve low-angle radiation from horizontal antennas requires antenna heights of a half wavelength or more, which creates obvious challenges on 80 and 160 meters.

Siting considerations

Verticals should be kept away from other large vertical structures such as towers, particularly those which are likely to be resonant at the operating wavelength. Trees are not a problem except as a possible physical obstruction in erecting the antenna. While locating in a region of high ground conductivity (such as salt water) is preferred, don't be discouraged if your QTH is not the ideal. I have achieved considerable success from a geographically mediocre location. Also, if installing a single-element vertical is the immediate objective, keep in mind the possibility and the space requirements for expanding to multiple elements (as I did).

Vertical size

Generally one thinks of verticals as being a quarter wave in height, but this does not have to be the case. The principle advantage of the quarter-wave vertical is that is looks approximately resonant at the desired operating frequency. This makes the job of impedance matching easier but otherwise offers no theoretical performance advantage over other heights. Increasing the height to 5/8 wavelengths provides an additional 3 dB gain, but such dimensions are impractical for most of us at the low frequencies. What can be very attractive for 80 and 160 meters from a practical standpoint is the use of short verticals (less than a quarter wavelength). It appears not to be well known in the amateur community that the theoretical gain of a very short vertical (even approaching zero length) is only a fraction of a dB less than that of a quarter-wave vertical. This fact may seem contrary to intuition, but has been well known in the engineering field for many years. (See Refs 1 and 2.) Therefore, there is no reason, in principle, to use a vertical as large as a quarter wave in the hopes of extracting more gain. Of course, there are practical considerations to be taken into account, namely that short antennas will exhibit lower radiation resistance and considerable capacitive reactance at the drive point making matching somewhat more involved, and the SWR operating bandwidth will be less than for larger antennas (the shorter the antenna, the smaller the bandwidth). More importantly, though, the lower radiation resistance makes it imperative that a low-loss ground radial system be employed to attain efficient operation. The radiation resistance depends partly on the method of loading used to resonate the antenna - capacitive "top hat" loading provides the highest radiation resistance and thus the highest efficiency, while base-coil loading techniques give the lowest radiation resistance and poorest efficiency. (See the following section on radial systems and ground loss for further discussion.) Also, top loading gives the largest operating bandwidth. Jerry Sevick, W2FMI, demonstrated in the 1970's that practical short verticals can be highly effective. His series of articles in QST (Refs. 3-5) makes very interesting to get more deeply into the subject.

My first try at a vertical was a top-loaded 38-footer on 80 meters (with about 80 quarter-wave radials). With this antenna, I was able to place first in the 80-meter single-band category in the 1983 CQWW and the 1984 ARRL DX CW contests. Over the winter of '83/'84, it was quite satisfying to be able to work DX such as VU2, 4S7, YBO, UM8, UH8, long and short path JA's, etc., that no one else even seemed to be able to hear. At this moment I am experimenting with 60-foot verticals on 160 and I am very encouraged by the initial DX results.

Ground Radial Systems

Without a doubt, the ground radial system is the single most important determinant of how the vertical will perform. If there is any secret to getting verticals to work, this is it. A ground rod simply won't do for a ground system unless you are fortunate enough to live over salt water. To be a bit more quantitative about the subject, consider the following expression for antenna radiation efficiency (fraction of power actually radiated versus that delivered to the antenna):

$$\text{Radiation efficiency} = \frac{Rrad}{Rrad + Rg + Rc}$$

where Rrad is the antenna radiation resistance, Rg is the ground loss resistance, and Rc represents

circuit losses in any matching network components, al in units of ohms. If Rg and Rc can be made to approach zero, then the efficiency approaches unity i.e., 100 percent. Also, if the various losses are fixed then raising the antenna radiation resistance, by top-loading instead of base-coil loading, for example, improves the efficiency. Now consider the following practical example of an eighth-wave vertical with a radiation resistance of 7 ohms, a ground loss of 20 ohms, and a matching network loss of 2 ohms (all typical of a simple installation). The efficiency, compared to the ideal, is only 24 percent. Most of the power is lost in heating up the ground. It is the poor efficiency of verticals when installed with a lossy ground system that probably accounts for the relatively unfavorable reputation of vertical antennas, at least in amateur circles. The point of installing ground radials is to drive Rg to zero to get the efficiency up.

The message is clear - put down lots of radial wire if you want the antenna to work. My current 3-element 80-meter array has consumed about 15,000 feet in radial wire. Installing this much wire was very tedious and time-consuming but eventually the job got done and was well worth it.

A few tips:

1. Large-gauge wire isn't necessary for radials since they won't be carrying much current if many radials are employed. I use number 22 gauge.

2. Insulated wire will do just fine, and, in fact, is probably preferable to bare wire since it will resist corrosion much better. Don't use noninsulated steel wire, i.e. electric-fence wire, as it will corrode away very quickly.

3. Don't bother burying the radials unless they present a physical nuisance. There is nothing to be gained performance-wise. In fact burying them too deeply can decouple the radial system from the antenna because of the intervening presence of the earth. If the radials are to be installed in one's yard, as mine are, the grass should be cut as short as possible, and the radials laid flush with the surface of the ground. In time the grass will grow around the wires and conceal them. I was fortunate enough to be able to get the radials in before I even had a lawn since I had just moved into a new home. Now not a single radial is visible in the lawn, even inches from the base of each vertical. There is no problem mowing the grass or carrying on other activities in the yard.

4. How many radials are required? There is no single correct answer for all situations. The higher one's ground conductivity, the fewer radials that are needed. Commercial broadcast standards call for 120 radials a half-wavelength long. This may seem like overkill but I would consider 40 quarter-wave radials to be the minimum number for a serious installation in an average environment for a quarter-wave vertical (and more for shorter systems). Furthermore, as I will discuss in Part II, the need for a low-loss radial system is more vital, in many cases, to multi-element phased arrays than for single-element systems.

5. As for radial length, there is no critical length except that the longer the better. They don't need to be all the same length. Stretch them out where the space permits. My radials range in length from 30 feet to 130 feet because of the dimensions of my property. Generally speaking, however, if all the radials must be short (say 0.1 wavelength or less), it turns out that a few radials are almost as good as many radials. Large numbers of radials are used to best advantage if they can be made as long as a quarter to a half wave long. References 5, 6 and 7 contain a thorough discussion of radial systems.

In Part II, I will discuss the promises and problems of vertical phased arrays, based on my experience in designing and building such systems.

References

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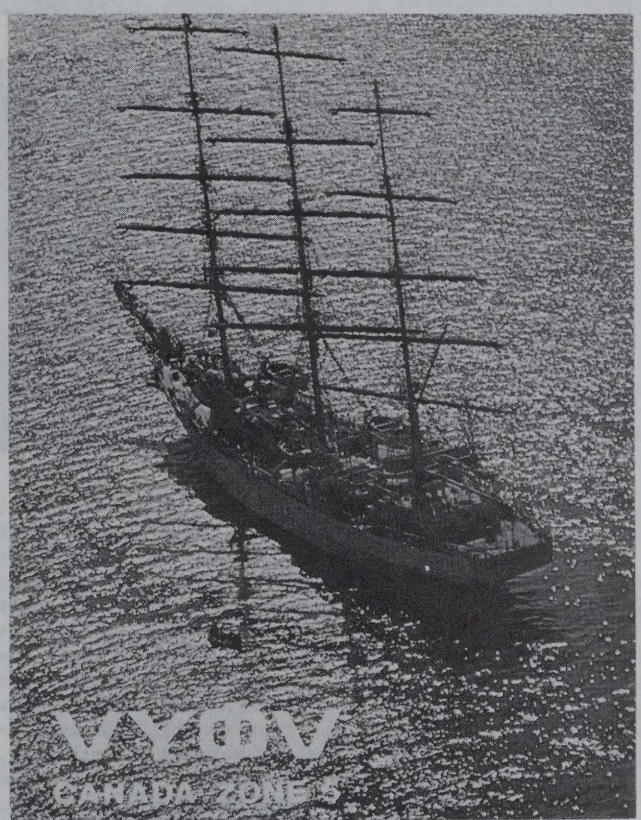
(YCCC Scuttlebutt)



Stacked beams or phased verticals? None of the above. One of the tall ships that participated in the celebration of Quebec 84. This QSL card is from VYØV - the station that operated from the old port of Quebec city on the occasion of the 450th anniversary of the arrival in America of French navigator Jacques Cartier.

ΦΛΑΚΕΨ ΙΔΕΑΣ

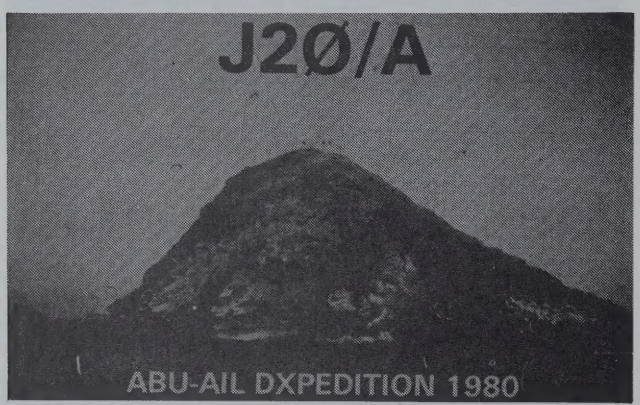
Paul Young, K1XM

I'm postponing my discussion of 900 MHz, because I have a topic which is of greater relevance to contesters:

When the FCC came up with the new callsign allocation scheme several years ago, they created a problem for hams by reducing the significance of the number in a callsign. Ever since then a sweepstakes exchange such as "40 A W7XXX 55 LA" has elicited a "what section?" response. Some hams have tried to solve this by signing portable, but this runs them afoul of the rules since they are NOT portable! I have a solution. It's voluntary, so it does not force anyone to use a longer callsign. Unfortunately it requires a change in the FCC rules, but it is not a complicated one.

What I propose, is that if you are not in your own call area, that you be allowed to put the call area number you are in after the digit in your callsign. For example, if he wanted to, Jeff Briggs could sign K12ZM, and AA1K would be able to sign AA13K. This would create 90 new prefixes for the people who care about such things.

The FCC allowed double-digit callsigns during the Olympics (remember the W84 and K23 calls?). That was long enough ago now that there would not be too much confusion over those "reassigned" callsigns. And when you work W75XXX you will know he is in Louisiana! (YCCC Scuttlebutt)



Abu Ail Islands (one of the most unusual callsigns used - only the prefix, with double digit number and with /A) are located in the Red Sea at 14 deg 5' North and 49 deg 49' East. The islands are of volcanic origin and there is no life other than that brought by humans on the island except for an occasional bird. The fort on the top of the rock was built by the Turks approximately two hundred years ago and was named Abu-Ali but somehow through misspelling it has come to be known as Abu-Ail. There is a lighthouse for navigation purposes.

The crew that operated from there in 1980 consisted of: J2BAZ, K6LPL, DJ9ZB, TU2IR and F6ATQ. The operation continued for approximately 100 hours and a total of 16,000 contacts were made. Due to power limitations and interference only two stations could be used at one time

It was difficult DXpedition and all operators swore "NEVER AGAIN," but the next day they were already talking about the next one. (DJ9ZB)

MOST CREATIVE NAME AWARD

Mike Crabtree, ABØX

Last year the KCDXC Newsletter established a new award for Field Day for the club or group that came up with the Most Creative Name for their organization. A careful examination of the names of some of the participants in the contest illustrates the importances of this activity in the entire Field Day experience. In fact, it's obvious that some groups spend more time thinking up a creative, unique name for their group than they do actually planning the operation.

Hopefully, if the KCDXC recognizes certain groups for their creativeness in the Field Day competition, the ARRL will soon realize the importance of this activity, and will include it as a special category in the contest.

Listed below are the 1985 Winners of the KCDXC Most Creative Name Awards. All are actual names as listed in the November 1985 QST:

Curly Shuffle FD Group
WB2AMU

Hogan's Heroes
KA1BED

Quality Not Quantity
W6TB

Winesprings Bald QRPers
N6EEV

Confederacy of Idiots
K5TMS

Raiders of the Lost ARC
N5HD

Rotten Radio ARC
WK4D

Better Luck Next Year ARG
KB7KY

Scrubpine Jones and the Bayonnet Band Busters
WØMHK/3

Camp Whatheheck
WA5UZB

Double Cheese No Onion
W8MRE

Texas Chiggers FC Group
AA5C

Three Mousketteers ARC
VE7ZAP

Fun Loving AR Troop
WBØTHC

Friday Afternoon RTS
K1XR
(This group commonly uses only the initials of their name!) *(KCDXC)*

ANTENNAS

Ken, "Judge" Glanzer, K7GCO

(Here is a "warning" what is coming from Ken in the near future. We are looking forward to his practical, innovative and tested ideas. They are a result of work that has been verified experimentally. VE3BMV)

There is one antenna that is very effective for both local and DX. I've about finished a very complete article on it. It's loaded with information that no one has ever given. It could be run in two parts.

I have a list of other topics to cover such as antenna tuners. I've come up with one for coax that obsoletes the rest of them. Other subjects will be the inverted vee, slopers and their relationship to the discone. A 1/4 sloper is really a discone with the feedline reversed. You will have to think about that one. I have some angle of radiation concepts that are very informative. Simple ways to test coax for loss. How to grid dip coax accurately for specific lengths. Broadbanding techniques. Slanted Quad loops near the ground are very effective. Adding strips of copper foil to aluminum elements to reduce losses and to eliminate joint losses is very effective. How to cleanup a beam, etc.

I also have interest in new product evaluations. I think the good stuff deserves coverage.

Another thing I'm working on is this concept of backscatter. This is sending out a pulse and measuring the time it takes to come back to determine 1. if the band is open and 2. how far. Great for contests and to test antennas or determine which one is best to call a DX station. All one needs is a transceiver that will recover in 15 milliseconds and minor attachments. It's a very powerful technique. I can test an antenna without making a contact.

My towers are all down for maintenance but will have them up again. By the way, I like prop pitch motors. I know three ways to convert them to higher speed and other improvements. Keep your eyes open for them.

Antennas can be easily scaled to 2 meters and use repeaters as test sources. They are all over and different distances but vertically polarized. I have a way of checking a yagi's horizontal polarization pattern on a vertical RF source without coax or mast interference. Normally good antenna test sites are free of surrounding objects for reflection reasons. This is not the case at a typical ham's location. I have a technique where anyone can test a 10, 6 or 2 meter band beam at any location and get reliable patterns--regardless of surrounding objects.

There is an easy way to test optimum stacking distances of beams that's been used for years but has got little play. 20 meter beams can be scaled to 10 or 6 real easy with very little scaling errors. Scaling works fine for resonant frequency, but a yagi's gain depends heavily on the Q of the director. As the frequency goes higher, the resistance of the director goes higher due to skin eaffect and progressively less area due to scaling, therefore lower Q and gain--so scale to 10 or 6 meters at the most for tests. (K7GCO)

VE3SR STILL QRT

Donations from across Canada and some from the United States have swelled the Jack Ravenscroft, VE3SR (ex VE2NV) RFI Susceptibility Defense Fund to more than $12,000 at press time. Still more may be needed if Jack is to be successful in regaining his right (and thereby the right of every Canadian radio amateur) to get on the air.

Pressure is mounting from citizens annoyed by RFI induced into poorly constructed and poorly shielded consumer electronic products. The lawsuit filed against VE3SR is expected to come to trial near the end of this year.

The Kanata, Ontario, ham lost his amateur radio privileges on July 25th when a "temporary" injunction was issued against him. This action of the court not only prevents him from using ham radio at his home, but for a distance of 25 kilometers from it!

Jack's station had been given a clean bill of health by the Department of Communications' Radio Inspection Service Branch. Never-the-less, appliances which lack any form of RFI immunity in a neighbor's home were disturbed by virtually any transmitter on any band, and thus deemed to "cause interference."

Genuine concern about the long term effects of this case have increased as time progresses beyond the 1 year point. The possibility that a commercial, broadcast or government transmitter could have its license to transmit suspended for similar interference would deny the technical reciprocity that exists between local electromagnetic radiation and appliances that have no radio frequency interference immunity whatsoever. this is because the Radio Act permits legal discourse on a technical basis for infractions of the Act whereas this case involves civil action and civil law.

The DOC has just completed an exhaustive four day test series at VE3SR's station. One hundred ninety-one separate tests were run consisting of 800 - 900 separate transmissions.

(Unbelievably, the neighbor has, as a result, filed further claims in the issues requesting another injuction to ban any transmissions from the Ravenscroft home, including those of the DOC engineers. Said notes in claim that test operations were "injurious to home entertainment and thermal control unit," and requests DOC engineers and DOC Bureau be named to co-defend. Justice decision is pending.)

One preliminary finding (prior to the issuance of an official DOC White Paper) was the complete absence of any microwave oven interaction.

Jack Ravenscroft would like to express his sincere thanks to all those who stood by and witnessed the tests on 20 meters. He apologizes for not being able to acknowledge all the many well - wishes he heard. Nearly 400 amateurs and associations across Canada and the US have supported the legal effort so far.

Tnx Babbit C. Arnell, attorney for Ralph Cameron (VE3BBM), Chairman of the Jack Ravenscroft Susceptibility Defense Fund, Box 8873, Ottawa, Ontario, Canada K1G 3J2. (Westlink Report)

(Could we have regulatory bodies solve those problems at the government and legislation level once and for all, before we "push for numbers?")

Chuck Clark, K4ZN

TRAFFIC EMERGENCY

The National Traffic System is a system of nets organized by ARRL to provide nationwide and world wide coverage for formal traffic particularly emergency traffic. ARRL calls it the "Long Lines" division of Amateur Radio.

Is it of much help in a real emergency? Many amateurs doubt it. The National Traffic System (NTS) meets only twice a day but often essential links in the system are missing. The result is that a message destined for somewhere outside the local area may take anywhere from several hours to several days to reach its destination. Not much help in a real emergency. Furthermore, with all the relaying of the traffic chances for error increase. Isn't it more practical to put the message into the hands of someone who can deliver it without going through the complexities of such a system?

It certainly is, if you can find somebody. In a real emergency, that could well be the best way to go. Select a frequency suitable for the distance to be covered, get on the air and listen for a station that can help. Call CQ, perhaps. Don't hesitate to break into someone's QSO to ask for help. In a real emergency, International Law requires them to assist you. But it is best not to argue with them if they refuse, just look for someone else. Help given grudgingly may be little better than none at all.

Suppose it is an urgent message, but not really an emergency. Or, it may be a big emergency generating a lot of messages going everywhere. You can't expect amateurs to spend all their operating time running errands for you. True, there are some who won't and some who even make it their principal operating activity. Although most amateurs have other things in mind when they go on the air. It may take a lot of tuning around the bands to find stations in the areas to which your messages are destined. It would be better to find one station that can handle them all. Someone who isn't hampered by the stresses of the disaster area. Where can you find one who is willing and able?

The other station may find it hard to locate an outlet for some of the messages, too. New York, Chicago, Los Angeles and other large cities usually are not hard to find represented on the amateur bands. What about Jamestown in South Carolina, Wingo in Kentucky or Bitter Creek in Wyoming? You are not likely to find an amateur on the air from such places or even from anywhere near within local calling distance. The best way to do it could be to find a station in the general area who can take the messages for that area, knows the area and knows how to get the messages to their destinations. How do you find such a station?

One solution could be to have stations in various parts of the country operating on specified frequencies, so that people who want to reach those areas will know where to look. Even better, let's have stations who can contact other areas for you too.

We already have this in operation. We call it the National Traffic System. You will find stations right in your own area who can connect you with someone anywhere where third-party traffic is allowed. Just give them a call and they will be glad to help.

How will this work in an emergency? In most cases, the best way to make initial contact or to transmit a real emergency message, one of life-and-death urgency, is to tune around on a suitable band to find someone who can help. If there happens to be a net in session within communication range, that is the best place to go. If the emergency involves only a few communications, you can handle them all there even if the emergency lasts for some time, such as for a ship in distress.

If it is a widespread emergency, a disaster, that will involve a large number of people and require extensive communications, make your initial contact the fastest way you can. Pass the word along that there will be a need for extensive communications.

The National Traffic System will support you in two ways. The regular net organization will be available for handling traffic that can bear the delay caused by going through the system. The net managers and Transcontinental Corps directors are able to provide stations who can set up special circuits to handle the large volume of traffic and to expedite urgent messages. They know who the amateurs are who specialize in traffic handling and how to get in touch with them. Often, where large volumes of traffic are expected, a teletype circuit can be established, as was done in the Mexico City earthquake emergency, moving messages along at 60 or 100 words per minute. Foreign names and foreign languages are no problem.

Some amateurs misunderstand the function of the NTS, and this includes some ARRL officials. The system as described in the books is intended for ordinary, day-to-day routine operation. Routine traffic is expected to go the usual route. But priority and emergency traffic should be handled the quickest way possible. If the traffic warrants it, this may mean taking it out of the system and putting it on land line. It often means setting up special circuits where traffic is heavy, not only for emergencies, but even for routine traffic as might happen during the holidays or in the case of an exhibition station. With only limited time available for NTS nets, a large volume of traffic coming from one station could tie up the net so that other stations with a message or two don't have a chance. Or else, the stations with the small load will take up all the time and let the big one hold the bag.

In an emergency, this would mean that health-and-welfare traffic would go by NTS except to and from the disaster area itself. Stations outside the area, but within easy communication range, would accept messages from NTS nets to be relayed to the disaster area and from the disaster area to be put

on NTS nets. Messages between officials in the area will usually be to and from a few specific locations such as the state capital, agency headquarters and the like. Special circuits should be set up for them entirely separate from those handling traffic for the general public. Because each emergency is different, it is up to the amateurs involved, particularly the Emergency Coordinator in the disaster area, to make the best use of the facilities available. The important thing is not to follow a system but to get the traffic moving, unless, as is usually the case, the system happens to be the most effective way to get the job done. (K4ZN)

DIARY OF AN EARTHQUAKE

John Moore, NJ7E/XE1HDO

Part 2

Finally, on Monday afternoon, the 30th, Carlos had to leave town, so I took up residence in the downtown Sheraton Hotel next to the American embassy, and started looking for another station to operate.

At the embassy, I discovered that Jim Ripps, N5CSH/XE1CSH, had set up a station. Jim is a member of Dallas RACES and ARES, and had volunteered to go to Mexico on behalf of the Mexican Consulate in Dallas. He arrived two days after the quake, and was able to set up a station at the 4th floor of the American embassy, in the hallway. This station consisted of an embassy supplied KWM-2 and a long wire antenna on the roof which was strung by the Air Force. Jim had been operating since then moving a lot of health and welfare traffic. I don't know how he made the phone calls - he is no more bilingual than myself - but I suspect he got volunteers at the Embassy to do it.

Shortly after I met Jim, the Air Force communications people were sent back to the states, and our KWM-2 disappeared. I spent most of Wednesday begging for another one from the Embassy radio shop. When we got it to the "shack" and set it up, we discovered that our antenna had vanished - back to the Air Force. We then begged the parts to build an antenna, and prevailed upon an embassy employee to escort us on the roof, and then went to the roof to string whatever we could. We ended up making a "wounded dipole" - one side level and the other side tapering down like an inverted V. This was erected during a thunderstorm, with Jim Ripps climbing the tower (I chickened out on this part) to rig the center. The antenna was cut by eyeball ("that looks like about 5 meters, doesn't it?), and turned out to be resonant at about 14.200!

We worked a little traffic during those days from the embassy, but the RF environment was so poor that the KWM 2 was deaf during the days, so we were limited to evening operation during the hour or two before the 20 meter propagation faded.

On Thursday, the embassy went back to normal operations, and all volunteers were ordered to cease operations from within the embassy. Thus, once again our station was torn down, and we ceased operations. Friday morning, Jim Ripps flew back to Dallas. Carlos had returned by this time and I went back to his house to continue operations. We handled traffic Friday and Saturday, and then I returned to the states on Sunday morning.

In total, the XE1HC/XE1ALD/XE1HDO combination handled about 3000 pieces of traffic. the bulk of that was health and welfare, but a few were urgent or emergency traffic on behalf of individuals or organizations. While I was there we took messages for the Salvation Army and the Center for Disease Control, and I suspect a lot more of these types of messages were handled before I got there. XE1HC was an unaffiliated and completely unofficial operation, with no help from any organized ham groups or government.

The US amateurs which we contacted deserve a lot of praise. They were for the most part professional, efficient and courteous. They were operating under difficult conditions, having to compete with each other in order to unload their traffic, while we merely had to make a request and it was immediately answered. Every request we made for a phone call, even to places as remote as Bolivia, was satisfied immediately! Phone patches were made for us throughout the US. In addition to the mighty efforts of K1MAN and K9VV, a number of other stations throughout the US provided patches, calls, temporary net control, and relay service. I wish I could remember the calls but there were too many.

The people of the US Embassy were very friendly and helpful, and it is extremely unusual for an embassy to support unofficial volunteers. I suspect it was even more unusual for them to allow the installation of a ham station in the embassy by non-embassy operators. (To be concluded in the next issue.) (Westlink Report)

COLOMBIAN EARTHQUAKE

Amateur Radio operators in the United States were again quick to spring into action when a long time dormant volcano in northern Colombia erupted two weeks ago.

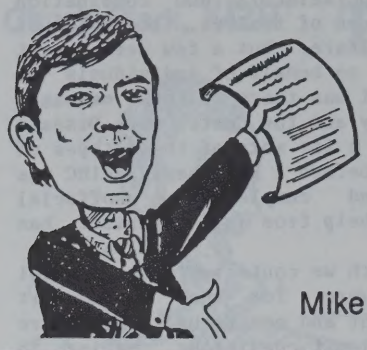
As reported in the commercial media, the eruption triggered a sea of mud and a storm of volcanic ash that wiped out several cities near the volcanic mountain, killing as many as 25,000 people.

In Virginia and Washington, DC, amateurs were put on alert by the Red Cross in the event other normal communications circuits to the crippled area of the Andes mountains failed. The hams stayed on alert for several days, and received wide press coverage for their dedication to the needs of the Colombian disaster refugees.

Further south in Miami, Florida, the S.I.R.A. organization set up a Colombian Volcano Disaster Hotline. According to Rafael Estevez, WA4ZZG, the club had complied a list of over 2,500 survivors of the volcanic eruption, along with their current location and what hospital they are in if they are injured. Tnx WA4ZZG, KC5CW. (Westlink Report)

HAMS RUN NYC MARATHON

The New York City Marathon had its 10th outing on October 27, and once again amateurs of NYC, NJ, CT and Long Island, over 270 of them turned out to provide communications for this massive event. There were 19,000 runners, 7,000 volunteers helped along the way. Three million spectators saw the race live, and an additional 30 million viewed on TV. 1,700 pieces of medical traffic were handled and 85 ambulances were dispatched. Congratulations!



TECH NEWS

Mike Spenuk, VE3JTQ

LCD ALTERNATIVE TO BOOKS

Work by a British firm on an electronic book could spell the end for conventional publishing. Five inventors at STC in Britain have been working on the alternative to the conventional book which is a handheld unit about the size of a paperback. It contains a liquid-crystal screen on a micro cassette player.

A book is published as digital data recorded on a replaceable cassette. When plugged in to the STC player, the digital data is transferred in packets to a small bank of solid-state memory. This stores only enough data to display one page of text on the screen. The tape is then run a little further to display a second page, and so on.

A microprocessor controls the display on the screen. The number of lines that appear on the screen and the text size can be controlled by the reader. (NEW SCIENTIST, 29 Aug 85)

FCC PROPOSAL WILL AID MANUFACTURERS

The Federal Communications Commission has proposed new rules for land-mobile radio transmissions that will speed up its rule making so that equipment makers can bring products to market easier and faster.

Currently, approval to use any type of modulation other than FM requires the submission of a petition to the FCC to amend its rules. Because this process is long and costly, many companies abandon their ideas before they are even started.

In the case of amplitude compandored single sideband (ACSSB), it was indicated that companies had gone bankrupt, or near to it, waiting for the FCC to grant permission to use the technology. The go-ahead for ACSSB took 5 years to come through.

With the new proposal, new mobile radio technologies could be possible without the need for rule-making. The only concern being that the new method does not create harmful interference to current users. If so, power derating would be used on the new technology to eliminate the interference.

Radio manufacturers welcome the new proposal, but some are concerned with the power derating. The power levels may not be satisfactory for the users.

On the other hand, the Special Industrial Radio Service Association, with its 12,000 members, is more interested in increasing spectrum than in new equipment investments. (Electronics, 26 Aug 85)

USE IT (UHF) OR LOSE IT

Are you interested in UHF work, but just haven't got around to getting the equipment running? Better get moving. There seems to be more and more pressure to re-allocate services. Remember, "use it or lose it?" This should really be, "use it, and wisely, or lose it."

BRITAIN'S SCIENCE IS GETTING GREY

The men and women in Britain's university laboratories and research institutes are getting older each year. The trouble is, there are signs that regeneration has come to a standstill. Jobs for the under-35's in scientific research are hard to come by. The number of under-35's employed has dwindled; meanwhile, the average age of the employed scientist has risen.

The problem has become the concern of the government and the Royal Society, but their programs are of limited use and can only graze the surface of the problem.

A study by "New Scientist" of the trends at the Department of Physics (the Cavendish Laboratory) at the University of Cambridge revealed some interesting facts. Figures show that from 1948 through 1984 the average age of the researchers has risen from about 37 to 47. Meanwhile, the percent of under 35 year olds has fallen from 50 percent in 1948 to just over 10 percent in 1984. And, it is only in the past 5 years that the proportion of under-35's has dropped below 20 percent.

The Cavendish Lab. was chosen by "New Scientist" because it is known as "a center of excellence" and "[it] is the last place we would expect a running down of bright, young science." The study also found that there are fewer support staff for the research students now (173 researchers/150 support staff) versus 1974/75 figures which show 132 research students/182 support staff. This statistic is of particular concern because without the technicians a particular project may not go ahead.

No particular field seems to be exempt from these statistics. The University Scientists in Medicine, Agriculture, Biology, the Physical Sciences and Engineering are all getting older. In the mean time, the proportion of under-35's is decreasing. In 1983/84, less than 15 percent of the engineering researchers in British Universities were under 35.

One explanation for these trends is the shift from tenured to short-term postings (5 year contracts). The government feels that the short-term contracts will enable research councils to be more flexible and shift studies according to developments elsewhere.

However, senior scientists view this as a step in the wrong direction. Young scientists are looking for a secure future so that they can buy homes and raise families. The short-term contracts appear very risky to these young people.

(New Scientist, 5 Sept. 85)

What is the solution? Non was offered in the article, but this problem seems to be quite universal so something must happen soon. After reading this article, I took a closer look at the Departments of Physics and Engineering Physics at McMaster University in Hamilton. There are definite similarities between McMaster and Cambridge in the age profiles of the researchers and also in the ratio of researchers to support staff. The problem at McMaster seems to be due to a lack of funding--a growing concern at all institutions, and the higher salaries offered by industry.

DBS: THANKS, BUT NO THANKS

Remember all the excitement over Direct Broadcast Satellites? Well, the technology is now available--it has been for a long time--the problem is the broadcasters feel the system is economically unfeasible right now. Or so the feeling was at the 14th Montreux International TV Symposium in Montreux, Switzerland this past summer.

Industry reps. were there showing off the latest in high-definition TV receivers and other "gadgetry for interactive cable services." "[Any] onlooker could have been forgiven for thinking that a TV revolution was only a couple of years, if not months, away." But it appears that this group of broadcasters was quite skeptical of the existence of a market for the "explosion in TV services."

From the broadcasters point of view the industry is running down a dead end street by developing the DBS and expanded cable systems. According to George Waters (a retired director general of Radio Telefis Eireann, now chief executive officer of Olympus Television--the DBS arm of the European Broadcasting Union) only France, Germany and the United Kingdom have the wealth and population to support their own DBS programs. He also pointed out that cable systems are more expensive to construct and maintain than was first thought.

In the U.S. many of the executives have concluded that the subscription rates (too high) are holding back cable distribution. In most areas the cable service offers the same programming as via the conventional reception.

Peter den Toonder, managing director of Oak Communications, Inc., in the Netherlands and moderator of the symposium feels that cable services will eventually lose out to DBS to provide the next generation of TV services.

Because the Broadcasters feel they have been sold "a lot of useless goods in the past," they are being very careful now. Extensive market research will be conducted to determine exactly what their audiences want. (Electronics, 24 June 85)

NEW RADAR FOR CARS

In August of this year a new device appeared for sale in the U.S.--a radar device that warns drivers of impending collisions while driving in fog. The $500 device was approved by the government, but there are no plans to make it compulsory.

It is called the Rashid Radar Safety Brake and the idea for the device came from George E. Rashid, a business executive in Michigan. Rashid's first attempt at a device like this was 30 years ago when the necessary electronics filled half of the car (cars where big then, too!); the new device fits in the "palm of your hand."

The device operates in the K-band and utilizes a narrow beamwidth, directional antenna to overcome the problem of bridges and roadside objects interfering with the normal operation the unit. The unit starts to work at speeds above 10 mph to avoid unnecessary alarms during parking maneuvers.

During normal driving the unit continually scans the road ahead and alerts the driver (by a yellow light) if it senses an object within the car's safe braking distance for wet roads. If the distance to the object appears to be closing a red light comes on, and a warning buzzer will sound if a dangerous condition exists.

The next stage in the radar's development will be to automatically apply the brakes when a collision seems imminent.

No car manufacturer is offering the unit as an option on new cars yet, but one insurance company in Michigan is offering a 20 percent discount for a car equipped with the collision radar. An interesting statistic from 1983: more than 32,000 people died in automobile collisions; 95 percent of the collisions were due to human error.

(New Scientist, 15 Aug 85)

CONQUERING EMI IN AUTO ELECTRONICS

Electronics in cars is expected to increase threefold by 1990. Many current problems arise from improper installation of mobile radios. A radio that is not properly grounded can set up ground loops running through the car's chassis.

Additional problems arise from the environment the car is in. Radiation from radio and TV transmitters, mobile radios and of particular concern are the 100 W mobiles in taxi and police service. But the majority of problems are with transmitters installed in the vehicle itself.

Ford Motor Co. has just completed its new $13 million EMI test facility in Michigan. GM has been running EMI tests in anechoic test chambers for several years. Chrysler is also doing EMI testing. Dennis Florence of Chrysler's Engineering division says they don't want any problems, "but we're not going to [protect] all of our cars...against some sort of strange occurrence we discover in the laboratory that the customer will never see in the field." "If we carried this to an extreme...we could add $200 to our cost, which would be several hundred dollars to the customer."

Currently EMI suppression adds about $30 to the cost of the car. (Electronics, 17 June 85)

In a related article, Eric VanderHeyden adds that additional sources of EMI include "transients caused by relays, switching power supplies...and electrostatic discharges from passengers that can be particularly disruptive to digital integrated circuits."

Further, various parts of the car can act as transmitting or receiving antennas. For example the front grill can act like an array of slot antennas. Also, the lengths of the various wiring harnesses throughout the car can present problems at certain frequencies.

According to VanderHeyden, one way that will reduce EMI is to use fiber-optic cabling. As well as eliminate the resonant wire length problem, the fiber cables provide isolation between interconnected points which aids in preventing ground-loops. (IEEE Spectrum, October 1985)

THE TRANSISTOR SHRINKS AGAIN

Massachusetts Institute of Technology researchers have fabricated what is believed to be the world's smallest silicon transistor. The MOS FET device has a channel length which is about 6 percent of the length of that in the smallest commercial transistors. MIT says cooling the device to very low temperatures shortens electron transit times improving high frequency response. Research continues to reduce impurities so that the transistor will run faster at higher temperatures.

(Electronics, 30 Sept 85)

THE CQ WW DX CONTEST PROGRAM FOR IBM-PC AND ZENITH H-100

Alan Harp, K4PB

PURPOSE

This is a set of programs that will handle the logging, dupe checking, and scoring of one session of the CQ WW contest. Logs are entered from the key board. At any time a DUPCHECK sheet can be generated for use by the operator. When the contest is over the program can print a set of log sheets and a summary sheet suitable for submission. If there are errors in the logs they can be corrected and the logs printed again.

DISC PREPARATION:

A disk should be prepared with your operating system ZDOS for Heath Zenith H 100 or MSDOS for the IBM PC. Files should include ZBASIC or BASICA, CQWWLOG.BAS, DUPCHECK.BAS TABULATE.BAS, DXCCEDIT.BAS, and DXCC.DAT. This is all that is required to handle a contest session. Other data files will be created during the course of the program.

BASIC COMPILER

We recommend that you compile these programs if you have the compiler available. It does require a great amount of memory to compile CQWWLOG.BAS. We don't know how much but we went from 192K to 448K in order to cover it. The programs store a large amount of data in strings and can go into a quiet mode while it rearranges storage space when operating under the interpreter.

GETTING STARTED:

Under ZBASIC or BASICA load and run CQWWLOG. You may wish to customize this procedure in an AUTOEXEC.BAT file. Upon the RUN command the program will begin by reading the file DXCCFILE.DAT. This data will be used by the program for discerning countries.

The first time the program is RUN it will ask you for information which will be stored on disk in a file called STARTFL.DAT. When this file is on disk it will be read by the program. To change this data you must delete the file from the disk and RUN the program again.

THE MENU:

After reading the STARTFL and DXCCFILE the program will display the main menu. This is the hub of the program. You will branch to functions from the MENU and return to the MENU before going to other functions. The MENU is as follows.

F1 MAKE ENTRIES INTO LOG
F2 PRINT DUP SHEETS
F3 PRINT LOGS AND TABULATE SCORES
F4 MAKE CORRECTIONS TO THE LOG
F5 PRINT DXCC LIST
F6 END PROGRAM

The menu is pretty much self explanatory. You will begin with F1 entering log data. You must do this one band at a time. Pressing F1 produces a prompt

METER BAND:

To go to another band you must first return to the menu. At any point you may want to stop and print a DUP sheet that may be used as a reference by the operator.

The program computes the country by using the callsign prefix and the zone. A list of possible countries is searched for the zone specified. If it fails to find the country or if you wish to override what you know it will find, the country can be entered manually. For the sake of the program numbers have been assigned to countries. Pressing F5 branches to a program that controls the DXCC list. A printout of this list can be generated from this program. In the process of logging, countries can be manually entered by typing their list number or spelling them exactly as they are in the list.

Log data may be corrected by a routine accessed by pressing F4. A sub menu will prompt you through corrections.

Pressing F3 will branch to a program that will read and print logs while compiling score. Print out will be in the format required for the contest. A summary sheet will be printed at the end. If errors are discovered they may still be corrected by pressing F4. After corrections are made the logs can be read and printed again.

DETAILED DESCRIPTION OF MENU FUNCTIONS:

F1 MAKE ENTRIES INTO LOG

Pressing F1 will clear the screen and prompt

METER BAND:

Acceptable entries are: 160,80,40,20,15,10. Enter the meter band you wish to log. The band you have entered will appear in the lower right of the screen on the 25th line. The program will search for a log file for the band you have selected. If there is none logging will start with QSO # 1. If log data was found, data from the last QSO logged will appear on the 22nd line of the screen.

On the 23rd line the number of the next QSO will appear followed by TIME:. Enter up to four digits for UTC time followed by return.

The time will become right justified. The next Prompt is STN. Enter the callsign of the station worked. Callsigns may be up to 10 characters long. For example WA4SVH/C6A is acceptable. However in zone 8 and the WA4 prefix the computer will not determine the country. Upon the first failure the system will search for a "/". If found it will go through the routine using what is behind the "/" for a prefix.

The next prompt will be SENT. On the first QSO of the band you must enter the full report. Example: 59905. If it is not the first QSO then the previous report will appear. The previous report can be entered by just pressing return. If you are continuously sending the same report the SENT report can be entered without keystroking. F9 toggles a switch shown as SKIP SENT on the 25th line. When on the previous SENT report will be automatically logged.

The prompt RCVD will appear next. Once again if this is the first QSO on the band you must enter the full report. However after the first QSO the report from the previous QSO will appear. If you only want to change the zone, type one or two digits of the zone. If the zone and report are the same the previous QSO can be entered by just typing return.

IMPORTANT! F10 toggles a switch which will allow or prevent the program from determining the country. It's status is indicated on the 25th line as COUNTRY SEL. When the COUNTRY SEL is on, the program will try to determine the country. If it succeeds the country will be logged and the next QSO will be prompted. When off or if the program

failed to determine the country, the COUNTRY: prompt will appear. Here you can enter the country number from the DXCC list or enter the name of the country spelling it exactly as it is in the DXCC list.

The country will be the last part of the log entry and will appear at the end of the line. The screen will scroll up and the next QSO will start.

To return to the menu press F2, followed by return. Prior to returning to the menu log data will be stored on disk.

While entering log data, data is stored after the 9th QSO and every 10th QSO there after.

If QSO data is not complete before returning to MENU, data for that QSO will not be stored.

Pressing F1 during a log entry will cause it to jump back one step or start over if you are at the RCVD step.

F2 PRINT DUP SHEETS:

Pressing F2 from the menu will load another program that will clear the screen and display DUPCHECK SHEET followed by the prompt METER BAND. As in the logging routine 160, 80, 40, 20, 15, and 10 are acceptable entries. Callsigns are sorted in alpha/numeric order and printed. The list is then stored on disk. The next time the band is sorted the file will be read from the disk. The program will go to one plus the number of calls in the list and start entering calls into the sorted list. This greatly speeds up the process. However, if the logs are edited by the error correction routine after a dupe file has been stored, and the number of QSOs is increased, your dupe file could end up with some missing calls. If the dupe file is removed from the disk the program will sort the entire log for that band.

The intention of this part of the program is to provide the operator with a DUP sheet where he can look up calls rapidly, that should contain everything except the log sheet in front of him. It also provides a DUP sheet for submission with logs.

It is perceived by the programmer that this system would work well even in a multi-multi situation where hand written log sheets are handed to the computer operator as they are completed. They are then entered and DUP sheets are printed and given to the operator. At the end of the contest all that is left to do is edit and correct errors.

F3 PRINT LOGS AND TABULATE SCORE

When you press this key, hopefully the contest is over. Be prepared to take a break and let the computer do the work. Just be sure your printer is ready and has enough paper.

The program will start reading log files and printing log sheets while tabulating score, zones, and countries. The last sheet will be the cover sheet.

Read the printed logs carefully. Were all zones correct? Were all countries indicated correctly? Logs may still be corrected and this process repeated.

F4 MAKE CORRECTIONS TO LOG

Pressing F4 clears the screen and prompt METER BAND: appears. As before 160, 80, 40, 20, 15, and 10 are valid entries. Band log data is read from the file and is ready for modification. The screen will display:

REVISE LOG PROGRAM
F1-ADVANCE ONE LINE
F2-GO BACK ONE LINE
F3-DELETE LINE
F4-MODIFY LINE
F5-INSERT IN AHEAD OF LINE
F6-GO TO LINE #
F7-SEARCH FOR CALL SIGN
F8-RETURN TO MENU
F11-LIST 22 QSO's

On the 23rd line the first QSO will appear. This is the working QSO.

Pressing F1 will display the next QSO.

Pressing F2 will go back one QSO.

Pressing F3 will delete the working line from the log.

Pressing F4 will allow the QSO to be entered again.

Pressing F5 will allow you to enter a QSO ahead of the working QSO. It is entered in the same manner as the log routine.

Pressing F6 will prompt you for a line #. Entering a valid line # will bring that line up as the working QSO.

Pressing F7 will prompt you for a callsign. The log will search for that call sign. If found, that line will become the working QSO.

Pressing F8 will return you to the main menu.

F5 PRINT DXCC LIST:

This branches to the DXCCEDIT program. From here corrections to the DXCC list can be made. The prefixes in this list are not used by the logging program. The name of the country is stored in a string that is used by the program. The menu of this program is as follows:

F1 MAKE CORRECTIONS TO COUNTRY #
F2 STORE CORRECTED DATA
F5 PRINT DXCCLIST
F6 RETURN TO MAIN PROGRAM

Pressing F1 will prompt you for a country number. Enter the number of the country you want to change. The next prompt will be the prefix of the country. If you want to change it type the new prefix followed by return. Typing return with nothing entered will allow it to remain unchanged. After the prefix the country string will appear as a prompt. Typing a new string will alter it. Typing return alone will leave it unchanged.

Pressing F2 will store the edited DXCC list on disc.

Pressing F5 will print the DXCC list on the printer.

Pressing F6 will return to the CQWWLOG program.

F6 END PROGRAM:

This key ends the program leaving you in basic with the program loaded.

NOTES:

This program has been written for the use of Amateur Radio and should be considered public domain. Feel free to pass it along but DO NOT SELL it. Amateur Radio is a hobby and this program was written in the spirit of that hobby.

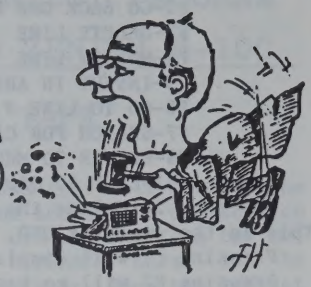
Feel free to modify and improve the program. This program has evolved out of other programs that I have been using over the years. It is difficult to stop improving it and to release an issue.

Also, a version of this program for the ARRL DX contest is available.

Your comments and suggestions are welcome.

The diskette with this program is available for $15 from:
Alan Harp K4PB, 8113 Belgium Dr., Raleigh NC 27606

FCC NEWS



BILL GRENFELL, W4GF

AMATEUR RADIO OPERATORS CAN BE VERY PROUD OF THEIR PERFORMANCE DURING THE RECENT MEXICO CITY EARTHQUAKE. Many people learned for the first time about the volunteer communications traditionally provided by Radio Amateurs during such disasters. Much of this recognition was due to a number of retransmissions of the Amateur communications by broadcast stations. In its BC Docket 79-47 Report and Order last June, FCC said "The Commission's Rules generally permit rebroadcasts of transmissions of stations in non--broadcast radio services,..." In the Order, FCC revised Section 97.113 of the Amateur rules which is titled "Broadcasting and broadcast related activities prohibited" and which reads, in part, as follows: "(b) An amateur station may not be used for any activity related to program production or news gathering for broadcast purposes. In the discussion of the rulemaking, in paragraphs 21 and 22, the Commission said: "21 - Emergency communications are listed as an exception to the provisions of new Section 97.113." "22 - We note that a rule of reason applies when interpreting this emergency exception to the broadcast prohibitions in the amateur radio service." "Thus, conveying news information directly relating to an unforeseen event which involves the safety of human life or the immediate protection of property falls within this rule of reason, if it cannot be transmitted by any means other than amateur radio because of the remote location of the originating transmission or because normal communications have been disrupted by earthquake, fire, flood, tornado, hurricane, severe storm or national emergency..." Many Amateurs were surprised and angry at the news gathering activity by the broadcast and print "media" especially when it was stretched far beyond the intent of FCC's "rule of reason." For example, the 10/04/85 issue of Westlink Report states that WB6NOA reported that "...newscasters were using ham radio for such purposes as setting up crew logistics and even discussing union crew pay scales; all this while refusing to handle health and welfare traffic into and out of the he disaster zone."

THE ARRL HAS PETITIONED FCC FOR PARTIAL RECONSIDERATION OF ITS ACTION IN BC DOCKET 79-47 REQUESTING THAT THE OLD DEFINITION OF EMERGENCY COMMUNICATIONS, OR ONE LESS RESTRICTIVE THAN THE FORMER, SHOULD BE ADOPTED. Old Rule Section 97.3(w) defined emergency communications as "Any amateur radio communication directly relating to the immediate safety of life of individuals or the immediate protection of property." New 97.3(w) reads: "Emergency communications - A none directed request for help or a distress signal directly relating to the immediate safety of human life or the immediate protection of property." The League said the "rule of reason" noted in the Report and Order (see preceding paragraph) is no substitute in this instance for a rule which is sufficiently broad on its face to allow amateurs the flexibility to exercise their own demonstrated reasonableness in emergency communications situations.

FCC HAS ANNOUNCED THAT A LIMITED AMATEUR THIRD PARTY COMMUNICATIONS AGREEMENT HAS BEEN CONCLUDED WITH THE UNITED KINGDOM, EFFECTIVE OCTOBER 14, 1984. It applies ONLY to U.K. special events stations using the GB prefix. However, GB3 prefix stations are excluded. The major first use was the Jamboree on the Air the weekend of October 19-20.

FCC REPORTS THAT "PIRATE" RADIO OPERATIONS HAVE BEEN IDENTIFIED, THROUGH ITS LONG DISTANCE DIRECTION FINDING SYSTEM, NEAR THESE CITIES: Richmond, Staunton and Charlottesville, VA; Youngstown, OH; Miami and Orlando, FL; Minneapolis, MN; Washington, DC; Louisville, KY; Waterbury, CT; Neward, DE; Grande Rapids and Lansing, MI; San Francisco, CA; Arkansas City, KS; and Fort Smith, AR. Persons having information that would assist FCC in its effort to locate pirate radio stations should contact: Engineer in Charge, FCC, P.O. Box 1588, Grande Island, NE 68802-1588, phone (308) 382-4296. (ARRL Letter, 10/10/85)

OPERATION OF AN UNLICENSED "PIRATE" RADIO STATION WAS CLOSED AUGUST 19,1985 BY U.S. MARSHALS AND FCC'S DALLAS OFFICE INVESTIGATOR WHO SERVED A WARRANT AND SEIZED THE RADIO EQUIPMENT AT THE HOME OF THE BOONESVILLE, AR OPERATOR. He had been operating on various frequencies in the 6 MHz SW broadcast band and in the vicinity of the 7 MHz amateur band. As a result, he has paid a $1,000 administrative fine. Another 7 MHz pirate broadcast station was located near St. Louis, MO on August 9, 1985 and the operator was issued a $1,000 Notice of Apparent Liability for his unlicensed operation. In addition to administrative fines, pirate station operators are subject to prosecution in U.S. District Court, and loss of any FCC license they may hold. (ARRL Letter, 10/24/85)

EDITIONS OF FCC AMATEUR LICENSE APPLICATION FORM 610 BEARING A DATE PRIOR TO JUNE 1984 WILL NO LONGER BE ACCEPTABLE BY FCC IN 1986. Applying on the earlier editions will result in return of the application without action. The new 1985 edition of the 610 eliminates some of the information previously required from Volunteer Examiners. The release date of the new 610 was not known at the time this was written.

BOTH THE UNITED STATES SENATE AND HOUSE VERSIONS OF A PROPOSED FCC LICENSE FEE SCHEDULE EXCLUDE COLLECTING FEES FROM RADIO AMATEURS writes K3ZJ (in Westlink, 10/18/85). "This was done in recognition of the public service performed by radio amateurs at no cost to the government, coupled with the fact that a 'fair' fee for services rendered, which would be in the $5 - $10 range, would be so low that it would cost as much to collect and keep track of as the fee itself." K3ZJ goes on to point out that there is a considerable administrative expense to FCC for its rule-making and enforcement activity for the amateur service, as well as for application processing.

ARRL'S COMMENTS ON THE REPEATER COORDINATION

DOCKET PR 85-22, FILED AUGUST 15, ARE SUMMARIZED AS FOLLOWS: 1) Coordinated repeaters should have preferred status in instances of harmful repeater to repeater interference; 2) Frequency coordination should be strongly urged for repeater or auxiliary operation in any area served by a frequency coordinator; 3) The FCC should not consider alternatives to frequency coordination nor mandate methods of coordination; 4) The use of modern technological innovations, such as those cited in the NPRM, should be encouraged, but not substituted for frequency coordination; 5) The FCC should not recognize a single entity, such as a National Frequency Coordinator, for amateur repeater operation. Such coordination activities should be performed by local or regional frequency coordinators with appropriate support to these coordinators to be provided by the ARRL; 6) The scope of frequency coordination should include all Amateur Radio stations in repeater or auxiliary operation; 7) Consideration of the procedural framework within which frequency coordinators are recognized and conduct their operations should be subject to a future FCC proceeding.

"THE FCC IS READY TO BACK THE ACTIONS OF ALL THE REPEATER COUNCILS IN THE NATION, BUT FIRST IT MUST ASCERTAIN WITH TOTAL ACCURACY WHO THESE COUNCILS ARE." This was the gist of remarks made by FCC Special Services Bureau Chief Raymond Kowalski during a Repeater Coordination Forum at the recent ARRL National Convention in Louisville, Kentucky. "Since there is no single entity willing to become a national 'clearing house' of repeater coordinators, Kowalski has requested that already existing, recognized and operating local coordination groups band together into unified regional bodies for the purpose of certifying valid coordinators to the Commission." (Westlink Report)

AS A RESULT OF FCC'S JULY 12, 1985 SHOW CAUSE ORDER FOR MALICIOUS INTERFERENCE AND OTHER RULE VIOLATIONS, LAWRENCE KACZMARCZYK, LICENSEE OF W3UQW, HAS SUBMITTED HIS AMATEUR STATION LICENSE FOR CANCELLATION AND HIS OPERATOR LICENSE FOR SUSPENSION FOR A ONE-YEAR TERM BEGINNING OCTOBER 18,1985. He may file for re-licensing in one year from that date. In addition to malicious interference to other amateurs in the two meter band (Section 97.125), he was charged with violation of 97.113 (Broadcasting prohibited), 97.115 (Music prohibited), 97.84 (Station identification), and 97.123 (Unidentified communication).

FCC HAS RECEIVED A PETITION TO EXPAND AMATEUR USE OF THE 902-928 MHz BAND TO INCLUDE F8E EMISSION (Frequency modulation - two or more channels of analog information - telephony).

IDENTICAL BILLS S-1667 AND H.R.3378, WHICH WERE RECENTLY INTRODUCED INTO THE U.S. SENATE AND HOUSE TO AMEND THE WIRETAP ACT OF 1968, HAVE THE PURPOSE OF PROTECTING THE PRIVACY OF DATA BANKS, CELLULAR AND CORDLESS TELEPHONES AND THE PREVENTION OF WIRETAPPING. Amateur radio transmissions would be exempt.

PART 90 OF FCC'S RULES HAS BEEN AMENDED "TO IMPLEMENT THE 1900-2000 kHz FREQUENCY BAND IN THE RADIOLOCATION SERVICE." (PR docket 84-874, by Report and Order adopted October 28 by the FCC)

FCC ISSUED OPERATING PERMITS TO THE GERMAN AMATEURS WHO FLEW THE SPACELAB D-1 MISSION 61A LAUNCHED LATE IN OCTOBER. The permits authorized privileges consistent with those in Germany, but not in excess of those of the Extra Class license. The letter of authorization ended with: "Thus it would seem once again amateur radio is poised for world wide exposure." (Westlink Report, 10/18/85)

FCC HAS ANNOUNCED THAT THE 1986 MAXIMUM REIMBURSEMENT ALLOWED FOR AN AMATEUR VOLUNTEER ADMINISTERED EXAMINATION IS: $4.29.

PROPONENTS OF THE USE OF DOUBLE SIDEBAND AMPLITUDE MODULATED AMATEUR TELEPHONY LOST A COURT BATTLE IN WHICH THEY MAINTAINED FCC'S ACTION IN DOCKET PR 82-624, LIMITING STATION POWER TO 1500 WATTS PEAK ENVELOPE OUTPUT, WAS UNFAIR AND ARBITRARY. They are allowed to continue operating (with A3 emission) using 1000 watts dc input power until June 1, 1990. (Rule Section 97.67(f)). "...the Federal Appellate Court ruled that the FCC has the right to make rules governing a given service, that the terms of the Administrative Procedures Act had been followed, and that the Commission could go ahead with its rule change." (Westlink Report, 11/01/85).

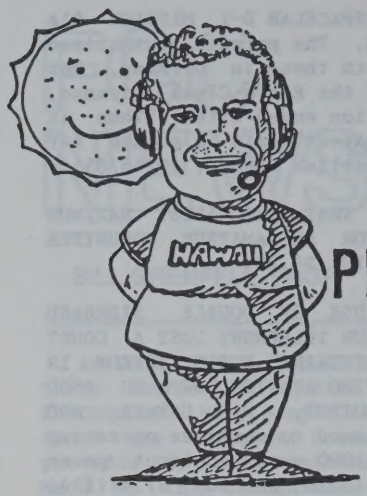
IT APPEARS THERE IS REAL SUBSTANCE TO THE NEWS REPORT THAT A "HAM" OPERATOR REVEALED HEARING AN UNSCRAMBLED TWO-WAY CONVERSATION BETWEEN DEFENSE SECRETARY WEINBERGER AND PRESIDENT REAGAN ABOUT INTERCEPTING THE JET CARRYING THE PALESTINIAN TERRORIST HIJACKERS OF THE ITALIAN CRUISE SHIP. An unidentified NY Times reporter confirmed to the ARRL Public Information Office "...that the individual who overheard and divulged the information to the media was a licensed radio amateur living in the Chicago area, but declined to identify the ham by name to protect his information source." "If his identity is discovered, he could be liable for severe criminal penalties." (Westlink Report, 11/01/85)

OPERATION ON 14349.0 kHz ON SSB IS TOO CLOSE TO THE BAND EDGE, AND CAUSED ISSUANCE OF AN FCC NOTICE OF VIOLATION TO AN AMATEUR WHO WAS HEARD OPERATING THERE. To quote the issuing officer, "For an upper sideband emission, a carrier frequency greater than 14347.2 kHz should not be used." (Westlink Report)

IN RESPONSE TO A PETITION FROM THE ARRL, FCC HAS REQUIRED ITS REGION 3 U.S. INTERNATIONAL BROADCAST STATION LICENSEES OPERATING IN THE 7.1 - 7.3 MHz TO PROVIDE MORE PROTECTION FROM INTERFERENCE TO RADIO AMATEURS IN REGION 2. The effect is to limit radiating toward Region 2 during the hours of 0800 to 1600 UTC to that which would occur from a half wave dipole at the same height. (FCC Order, 10.09/85).

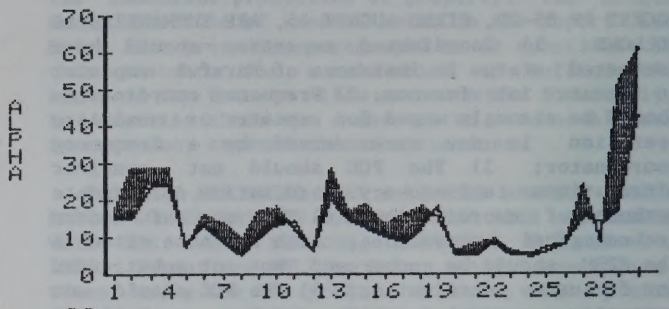
FCC ENGINEERS FROM ITS SAN FRANCISCO OFFICE TOGETHER WITH U.S. MARSHALS CONDUCTED A SEARCH AND SEIZURE OF OVER $30,000 WORTH OF ILLEGAL CW EQUIPMENT ON OCTOBER 8, 1985. Included was illegal RF amplifiers, modified CB radios and sales records. The search and seizure was at Doc Holiday Communications of Santa Clara, CA.

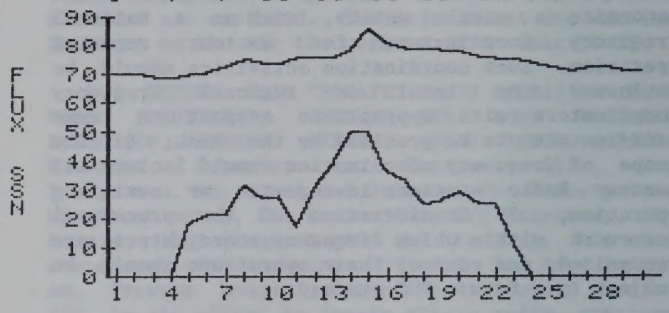
THE ARRL FILED A REQUEST FOR STAY AND RECONSIDERATION OF FCC'S PR DOCKET 85-21 ACTION WHICH REMOVED THE 30 DAY REEXAMINATION-AFTER-FAILURE WAIT PERIOD. It has recommended a 27 day wait period. (W4GF)

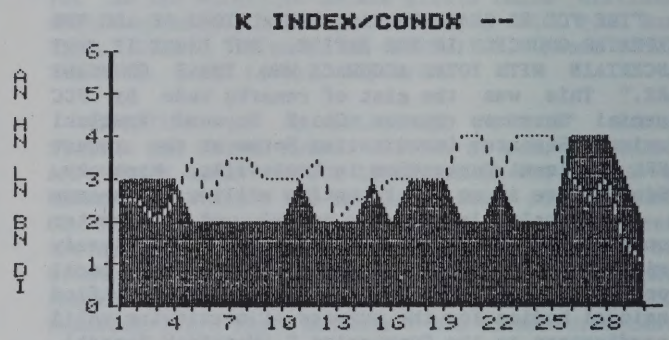


KH6BZF PROPAGATION REPORT

Lee Wical, KH6BZF







Statistical information is compiled by KH6BZF and processed on a computer by VE3BMV.

The first diagram shows the value of solar flux (top curve) and SSN - sunspot number (bottom curve). The X axis and scale is the same for both. The Y - axis is calibrated in days of the month.

The second diagram shows variation of the Alpha Index for each day. The dark shaded area shows increases, while the white area shows decreases in the value of the Alpha Index for each day.

The third diagram shows the value of the K Index (shaded area) on a scale from 0 to 6. The dotted line represents the propagation quality where the scale is: from 5 = Above Normal to 1 = Disturbed.

FORECAST:

BEST HF CONDX: DEC 17-21

BEST VHF CONDX: GEMINIDE METEOR SHOWER DEC. 10-15.

NOVEMBER 1985

NOV '85	CONDX	SOL FLUX LEVEL	SSN#	GEOMAGNETIC LEVEL	ALPHA INDEX	K INDX	NOTES
01	LN-BN	070 VY LOW	0	UNSETTLED	15/17	K=3	NO SUNSPOTS
02	LN-BN	070 VY LOW	0	UNSETTLED-ACTIVE M.S.	15/29	K=3	NO SUNSPOTS
03	BN	069 VY LOW	0	ACTIVE-MINOR STORM	24/29	K=3	MINOR STORM @ 04/1900 UTC
04	BN-LN	069 VY LOW	0	ACTIVE-MINOR STORM	24/29	K=3	MINOR STORM @ 04/1900 UTC
05	HN-LN	070 VY LOW	18	QUIET-ACTIVE	08/07	K=2	RGN 4700(8) N16, W25
06	BN-LN	071 VY LOW	21	ACTIVE-UNSETTLED	13/16	K=2	RGN 4700(11) N14, W41
07	HN-LN	073 VY LOW	22	QUIET-ACTIVE	08/13	K=2	RGN 4700(12) N14, W54
08	HN-LN	075 VY LOW	31	QUIET	05/09	K=2	RGN 4700(9) 4701(3)
09	LN	074 VY LOW	27	QUIET-UNSETTLED	10/17	K=2	RGN 4700(3) 4701(4)
10	LN	074 VY LOW	28	UNSETTLED	13/18	K=2	RGN 4700(2) 4701(6)
11	LN	076 VY LOW	17	UNSETTLED-ACTIVE	14/12	K=3	RGN 4701(7) S10, E40
12	LN-HN	076 VY LOW	31	QUIET	06/06	K=2	RGN 4701(10) S10, E26
13	BN	076 VY LOW	39	QUIET-M.S. LVLS	20/28	K=2	RGN 4701,4702,4703 FLARE C1/SF @ 13/1716
14	LN-BN	079 VY LOW	50	M.S.LVLS-QUIET	14/17	K=2	RGN 4701(7) S09,E03 4702(2) N03,E46 4703(10) S09,E41
15	LN-BN	086 VY LOW	50	QUIET-UNSETTLED	12/19	K=3	RGN 4701(8) 4702(2) 4703(10) S08,E27
16	LN	081 VY LOW	36	UNSETTLED-QUIET	10/13	K=2	RGN 4701, 4702 & 4703
17	LN	079 VY LOW	33	QUIET-ACTIVE	08/16	K=3	RGN 4701, 4702 & 4703
18	LN	079 VY LOW	25	UNSETTELD-ACTIVE	12/18	K=3	RGN 4703(8) S08, W01 4704(5) N02, E29
19	LN	078 VY LOW	26	ACTIVE-M.S.-QUIET	18/15	K=3	RGN 4703 & 4704
20	HN	078 VY LOW	29	UNSETTLED-QUIET	05/06	K=2	RGN 4703 & 4704
21	HN	076 VY LOW	25	UNSETTLED-QUIET	05/08	K=2	RGN 4703(4) S09, W59 4704(1) N03, W29
22	LN	075 VY LOW	25	QUIET-UNSETTLED	08/09	K=3	RGN 4703(4) S09, W71 4704(1) N03, W61
23	HN	075 VY LOW	11	QUIET-UNSETTLED	05/06	K=2	RGN 4704(1) N03, W85
24	HN	074 VY LOW	0	QUIET	04/05	K=2	RGN 4704
25	HN	072 VY LOW	0	QUIET	06/07	K=2	NO ACTIVE RGN
26	LN	071 VY LOW	0	QUIET-UNSETTLED	08/08	K=4	NO ACTIVE RGN
27	LN-BN	072 VY LOW	0	UNSETTLED	15/24	K=4	NO ACTIVE RGN
28	LN	072 VY LOW	0	QUIET-UNSETTLED	13/08	K=4	NO SUNSPOTS
29	BN-DIS	071 VY LOW	0	MAJOR-MINOR STORM	17/51	K=3	MAJOR STORM BEGAN 29 08/05 UTC
30	DIS	071 VY LOW	0	MAJOR-MINOR STORM	42/61	K=2	DIS/STORM/ACTIVE AURORA

CONTEST RULES

FRANK ANZALONE, W1WY
CQ Magazine

Calendar of Events

*	Jan. 1		AGCW Happy New Year Pty
*	Jn.1-	De.31	U.B.A. SWL Competition
	Jan. 5		ARRL Midnight Special
	Jan. 11-12		ARRL VHF Sweepstakes
	Jan. 11-12		Mich. QRP Club CW Contest
	Jan. 18		AGCW-DL QRP Contest
	Jan. 18-19		R. Nest & C. Stick Sprint
	Jan. 18-19		Hungarian DX Contest
	Jan. 18-19		White Rose SWL Contest
	Jan. 18-20		North Dakota QSO Party
	Jan. 24-26		**CQ WW 160 M CW Contest**
	Jan. 25-26		French CW Contest
	Feb. 1-3		New Hampshire QSO Party
	Feb. 8-9		QCWA CW QSO Party
	Feb. 8-9		YL-OM Phone Contest
	Feb. 8-9		YL-ISSB Phone Contest
	Feb. 8-9		Dutch "PACC" Contest
	Feb. 15-16		ARRL DX CW Contest
	Feb. 21-23		**CQ WW 160 M SSB Contest**
	Feb. 22-23		French Phone Contest
	Feb. 22-23		YL-OM CW Contest
	Mar. 1-2		ARRL DX Phone Contest
	Mar. 8-9		QCWA Phone QSO Party
	Mar. 8-9		RSGB Commonwealth
	Mar. 15-16		YL-ISSB CW Party

ARRL Midnight Special

0400Z to 0600Z Sun., Jan. 5
(11 p.m. to 1 a.m. EST Sat., Jan. 4)

This is a new 80 meter shorty. The first hour will be on CW (3540-3570 kHz) and the second hour will be on phone (3855-3895 kHz).

The exchange is also short, a 3-digit QSO number starting with 001 and your name.

Each station may be worked once on each mode.

Final score, total number of contacts. No multiplier. Scores will be listed in *QST*.

Send your entry to the ARRL, Newington, CT by February 3rd.

ARRL VHF Sweepstakes

1900Z Sat. to 0400Z Mon., Jan. 11-13

This is the 39th ARRL January VHF Sweepstakes. ARRL Headquarters recommends that you use the official log forms. It will make your log keeping and the scoring much easier. A large SASE to Newington will get you the necessary forms.

Complete rules will be found in the December issue of *QST*. They are a bit complicated, so look them over carefully.

Michigan QRP Club CW Contest

1500Z Sat. to 1500Z Sun., Jan. 11-12

This is the sixth annual QRP contest sponsored by the Michigan QRP Club. It's a CW only on all six bands, 10-160 meters.

Each station will be competing with own state, province, or DX country in one of the following categories:

1. One (1) watt or less output.
2. Five (5) watts or less output.
3. Over five (5) watts output.

Exchange: RST and QTH. Sstate or province for W/VE's, country for DX, and power output.

Scoring: Each contact is worth one (1) QSO point. Multiply total QSO points by number of states, provinces, and DX countries worked on each band.

There is a bonus multiplier of 1.5 for stations using emergency power (natural or battery).

Awards: Certificates to the top-scoring station in each state, province, and DX country.

Use a separate log sheet for each band, and include a summary sheet showing the scoring per band, equipment used, and power output. Also include the usual signed declaration and your name and address in block letters.

Logs must be received no later than six weeks after the end of the contest by Chris Hethorn, KM8X, 6818 Meese Drive, Lansing, MI 48910. Include an SASE (or 2 IRC's) if results are desired.

Rat's Nest and Crooked Stick Sprint

2300Z Sat. to 0400Z Sun., Jan. 18-19

The Issaquah Amateur Radio Club of Bellevue, Washington is sponsoring this unusual contest with a funny name. A review of the rules will verify how it got its name.

Requirements are that you use a homebrew wire antenna in any configuration as long as it includes the use of a crooked stick for a support. *(Wonder if a crooked tree qualifies?—ed.)*

Exchange: Name, QTH, and type of antenna. Club members will indicate their membership.

Scoring: CW contacts 5 points, SSB 2 points. The multiplier is determined by the number of states, provinces, and countries worked, × 2 (?).

Bonus: To encourage "Elmering" and participation by new individuals and old-timers alike, the following bonus has been established: contacts made with apprentice's assistance + 2 points; contacts made by apprentice + 5 points. Minor coaching allowed.

(I'm a bit confused, so the above rules are quoted verbatim.—ed.)

Frequencies: CW—7050-7150 MHz. SSB—7225-7300 MHz. Maximum of 250 watts input.

Awards: Issued in six different categories—(A) Best using a rat's nest antenna; (B) Best Novice/Tech.; (C) Best Elmer; (D) Best CW; (E) Best SSB; (F) "Rat Catchers" certificate if you contact three or more club members. (Club members must indicate their membership.)

Include a summary sheet with your entry showing the scoring, plus description of antenna and equipment used. Indicate your contacts with IARC members.

Submit your log no later than February 1st to: Issaquah ARC, c/o Steve Pack, WB7VAS, 4609 158th Ave. SE, Bellevue, WA 98006.

Hungarian CW Contest

2200Z Sat. to 2200Z Sun., Jan. 18-19

This is an annual affair organized by the Hungarian Radioamateur Society to promote better relations between HA's and amateurs in other countries.

Classes: Single operator, both single and all band, and multi-operator all band (club stations).

Exchange: RST and QSO contact number starting with 001. HA stations will also add two letters to identify their county. There are 20 counties: BA, BE, BP, BN, BO, CS, FE, GY, HA, HE, KO, NO, PE, SA, SO, SZ, TO, VA, VE, ZA.

Points: Contacts with HA stations count 6 points. With other stations outside own continent, 3 points. Same station may be worked on each band for QSO points.

Multiplier: Each different HA county worked on each band.

Score: Total QSO points from all bands times the sum of the multipliers from each band.

Frequencies: 3500–3590, 7000–7035, 14000–14090, 21000–21090, 28000–28090 kHz.

Awards: Certificates to the top scorers in each class in each country. Additional awards if returns justify.

Use a separate log sheet for each band and include a summary sheet showing the scoring, etc. The usual signed declaration is also requested.

Mail your entry within six weeks from the end of the contest to Hungarian Radioamateur Society, Contest Bureau, P.O. Box 86, H-1581 Budapest, Hungary.

AGCW-DL QRP CW Contest

1500Z Sat. to 1500Z Sun., Jan. 18–19

This is the winter edition of this QRP contest organized by the AGCW-DL. It's a CW only on all 6 bands, 10–160 meters. The same station can be worked on each band for QSO and multiplier credit.

There are five classes as follows:

A. Single Op.—3.5 watts or less.
B. Single Op.—10 watts or less.
C. Multi-Op.—10 watts or less.
D. QRO stations, over 10 watts.
E. SWL's.

Multi-operator stations may operate the full 24 hours. All other classes must take a 9-hour break.

Exchange: RST, QSO no., and power input. Add × if transmitter is crystal controlled (559001/5×, QRO stations 579002/QRO).

Points: QSO with own country, 1 point. Other countries own continent, 2 points. DX outside own continent, 3 points. Crystal-controlled stations are limited to 3 crystals for each band, and take double above points.

Multiplier: One for each country and one for each DX contact. For scoring purposes call areas in JA, PY, VE, VK, W/K, and ZS are counted as multipliers.

Final Score: Total QSO points times the multiplier on that band. Add the sum of scores from each band.

Awards: Certificates to the first three places in each class on each band. Use a separate log for each band.

All entries must be received no later than six weeks after the end of the contest. Include 1 IRC for copy of results.

Entries go to Siegfried Hari, DK9FN, Spessartstrasse 80, D-6453 Seligenstadt, Fed. Republic of Germany.

White Rose SWL LF Contest

1200Z Sat. to 1200Z Sun., Jan. 18–19

Very few DX contests have an SWL category. Here is one for SWL's only sponsored by the White Rose Radio Society of England.

You can use up to 18 hours out of the 24-hour contest period, but be sure to indicate times off in your log.

There are two separate sections, phone and CW, no mixed mode entries.

Only the three LF bands—1.8, 3.5, and 7 MHz—may be used.

Points may be claimed only for stations heard in contact with another station. Both stations may be logged, but the practice of logging a series of QSO's made by one station is not allowed. Logs must not include the same call in the "station worked" column more than 10 times on each band. A station appearing in the "worked" column can only be claimed once for scoring.

Score 1 point for each station heard on each band from one's own continent, and 5 points if station is in another continent. Multiply total points by the number of different countries heard on each band. Add the total of the three bands for final score.

The ARRL country list is the standard. In addition, each call area in the U.S., Canada, Australia, and New Zealand will be considered a separate multiplier.

Show date and times in GMT, band, station heard, station being worked, and signal report. Points may only be claimed for stations actually heard. If points are claimed for both stations, both calls must appear in the "station heard" column.

Certificates of Merit will be awarded at the discretion of the Society.

Entries must be received no later than February 24th and go to Contest Manager, John Hart, G3ZGA, White Rose ARS, 146 Street Lane, Leeds LS8 2AD, England.

French DX Contest

CW: Jan. 25–26 SSB: Feb. 22–23
0600Z Saturday to 1800Z Sunday

This year's announcement from the REF showed no change from last year's format. It's still the world working the French Europeans as well as the other French departments and territories all over the world. The French areas can usually be identified by the letter "F" in the prefix.

Classes: Single operator and multi-operator. Multi stations must remain on the same band at least 15 minutes.

Exchange: RS(T) plus a 3-figure QSO number starting with 001. French stations will also include two figures or letters identifying their department.

Points: One point per contact between stations in the same continent, 3 points if with other continents.

Multiplier: Each French European department (95) and each overseas department and territory worked. Also DA1 and DA2 French Army, 2A and 2B Corsica, and the Club station F6REF.

Final Score: Total QSO points from all five bands (3.5–28 MHz) times the sum of the multipliers from each band.

Awards: Certificates to the top scorers in each country. European single operator must make at least 100 QSOs; multi-operators 250 QSOs. All other areas 50 QSOs for single operator, 100 QSOs for multi-operator.

Stations making over 250 contacts must include a dupe check list with their log. The usual disqualification rules for excessive duplicate contacts and other violations will be strictly enforced.

All entries must be postmarked no later than March 15th for CW and April 15th for SSB. This year they go to The REF Contest Committee, Att: Lucien Aubry, F8TM, 53 Rue Marceau, 91120 Palaiseau, France.

(Of the 286 CW and 121 phone overseas logs received in the 1985 contest, the following were the only North American entries. CW: W1BWS 37548 points, KA1DWX 12432, W3ARK 5550, K5ZP 686, WA3JXW 240, W1OPJ 126, KB0YK 8, HI8A 7744; HP1XKR 2160, TI4BGA 2262. Phone: W3ARK 1152, VE1NG 17640, VE2AFC 324.)

New Hampshire QSO Party

1900Z Sat. to 0700Z Sun., Feb. 1–2
1400Z Sun. to 0200Z Mon., Feb. 2–3

The New Hampshire ARA is again sponsoring this year's party.

The same station may be worked on each band and each mode for QSO points, but the multiplier is counted once only. NH-to-NH contacts are permitted for QSO credit.

Exchange: RS(T) and QTH. County for NH stations; ARRL section or DX country for others.

Scoring: One point per QSO for NH stations. Multiply total by sum of ARRL sections + NH counties + DX countries worked. (Excluding NH section. US and Canada not countries. KH6 and KL7 count as countries.) Others count 5 points for each NH contact. Multiply total

by number of NH counties worked (maximum of 10).

NH counties: BP, CL, CE, CS, GN, HO, MK, RM, SD, SN.

There is an additional bonus of 20 points for all stations working club member stations WB1CAG, W1OC, WB1FFZ, K1RD, W1WQM, N1BYQ, KB1HJ, and KØUNJ (a maximum of 160 bonus points).

Frequencies: CW—1810, 3559, 7055, 14055, 21055, 28055. Phone—1875, 3935, 7235, 14280, 21380, 28580, 50115, 144205. Novice—3730, 7130, 21130, 28130.

Awards: Certificates to the top scorers in each NH county, each ARRL section, and each DX country (minimum 5 QSOs).

The Concord Brasspounders are awarding a plaque to the top scorer in New Hampshire. Also, W1JB is awarding the All NH Award to all participants working all 10 NH counties.

Mailing deadline for logs is March 25th to Mount Moriah Repeater Assn., c/o Bud Valcourt, N1BYQ, 19 Teague Drive, Salem, NH 03079.

North Dakota QSO Party

0000-0800Z & 1600-2400Z Sat., Jan. 18
0800-1600Z Sun., Jan. 19

Sponsored by the Red River Radio Amateurs of Fargo, North Dakota, this one will make one of the rarer states available for WAS and County Hunters.

The same station may be worked once on each band and each mode.

Exchange: RS(T) and QTH. County for ND stations; state, province, or country for others.

Scoring: Count 10 points for phone QSO's, 20 points for CW, and 50 points for RTTY. ND stations add 250 bonus points for working 5 Novices.

Final Score: ND stations multiply total QSO points from all bands by sum of states, provinces, and countries worked per band and mode. Others multiply by total number of ND counties worked (maximum of 53).

Frequencies: CW—1810, 3540, and 35 kHz up from edges on other bands. Phone—1810, 3905, 7280, 14295, 21380, 28500. Novice—25 kHz up from edges of Novice bands.

Awards: None mentioned, but include a large SASE with your entry for a copy of the results to see if you won anything.

Mail logs by February 28th to Mike Beaton, KDØA, 2267 Flickertail Drive, Fargo, ND 58103.

CQ WW DX 160 Meter Contest

CW: Jan. 24-26 SSB: Feb. 21-23
2200Z Friday to 1600Z Sunday

Since this year's announcement was prematurely published in the October issue, a brief summary of the rules might be helpful.

Essentially, the rules are the same as those used in previous years. However, the penalties listed last year for making on-frequency contacts in the "DX window" were not included. We are still very critical of those abusing this long-standing and recognized "gentlemen's agreement."

Classes: Both single and multi-operator.

Exchange: RS(T) and QTH. State for U.S., province or call area for Canada. Not necessary for DX to spell out their country, but it is recommended that only standard prefixes be used in their call.

Scoring: Contacts with stations within own country 2 points, with other countries but same continent 5 points, with other continents 10 points.

Multiplier: Each U.S. state (48), each Canadian area (13), and each DX country.

Awards: Certificates to top-scoring station in each state, VE area, and DX country in both classes. The trophy awards list has not been completed, but will be announced in this column when it is completed.

The disqualification clause for excessive duplicate contacts and other violations is still very much in effect.

Include a summary sheet with your entry showing the scoring and other information, and a signed declaration that all rules and regulations have been observed.

Mailing deadline for CW entries is February 28th, and March 31st for the SSB section. Logs can be sent directly to the 160 Contest Director, Don McClenon, N4IN, 3075 Florida Avenue, Melbourne, FL 32904. They, of course, can always be sent to *CQ* 160 Meter Contest, 76 North Broadway, Hicksville, NY 11801. *(Please indicate CW or SSB on the envelope.)*

Our 160 Meter CW Contest was first organized some 25 years ago when the band had little activity and was loaded with Loran QRM and many AM signals, and we were limited to low power, depending on where we were located. (We might cause QRM to the multi-KW's Loran signal, you know.) We recognized Stew Perry, W1BB's "DX window" band plan for working the few weak DX stations that were on the air at that time, and it was incorporated into our rules.

In recent years more and more countries have opened the top band to amateur operation, but unfortunately some countries have placed restrictions as to what portions they can use, making the "window" unavailable to some stations. However, the majority of Europeans can still take advantage of split-frequency operation out of the "window," and we are going to retain this band plan feature in our rules.

The success of working split out of the "window" cannot be realized without the cooperation of the overseas DX stations. In last year's contest a few of the more powerful DX stations continued to solicit on frequency contacts in the "window." The resulting QRM not only cut down their own contact total, but made it impossible to hear the many weak DX stations trying to make split-frequency contacts out of the "window."

Because of a feeling of guilt or perhaps a fear of being disqualified, these offenders did not submit a log. No credit was given to those who worked them.

By the same token, we take a dim view of W/K's and VE's who do not observe the recommended plan of operation on 160 during a contest and also continue to solicit DX contacts in the "window." They are certainly not setting a very good example.

I am a bit apprehensive of what to expect in this year's coming contest, especially now that the FCC has added to the confusion by permitting additional modes of operation without assigning a band plan of operation.

I hope we do not experience too many problems.

It is always a difficult chore to report a Silent Key, especially when it is for a personal friend. Tom Peruzzi, W4BVV, died on October 5th after a 10-month bout with acute leukemia. Tom was a long-time member of the PVRC, and his multi-multi station contributed many big scores to the PVRC's Championship years.

He had recently moved to a new location and was in the process of putting up a 100 foot tower. In spite of his failing health he completed the job just three days before the diagnosis of his health problem.

Tom was also a long-time sponsor of the World-Wide European Trophy. His wife, Sherry, wishes to continue this award as a W4BVV Memorial. Her wishes are being honored. Final arrangements are being worked out and will be given in this column when completed.

Rest in peace, good friend. Your big signal will be missed come contest time.

73 for this time, Frank, W1WY

Dear Yuri,

Thanks for the fine magazine Yuri, I sure do enjoy it and read it from cover to cover. I sure like the articles about antennas and hope you have more on 40, 80, and 160 meter ones. I have only been chasing DX for about 3 years now, and have not tried contesting yet, because my shack is next to my dad's bedroom but someday I will give that a try too.

Yuri, I have been made president of the local club here in town and I wonder if you know where I can get VHS movies on DXing and contesting to show at the club meetings?

Keep up the good work Yuri. Enclosed is my subscription for another year.

Jim, KC8KE

Dear Jim,

Thank you for your kind comments. We are hoping to exhaust the low band antenna topics over the next few years, while we are going through the bottom of the sunspot cycle. See the articles in this issue also.

Try CW contesting. It is very quiet if you use good headphones; only transformers and fans are heard while keying the transmitter. We are planning to have a series of video movies on the topic of contesting and DXing; watch for the announcements. There are some video tapes already made about K2GL (N2AA), W3LPL and the funny video made by the Kansas City DX Club. They might be able to provide you with copies. Try to operate in the major contests. There are many good stations from some rare spots which are using good antennas and are easy to work even with QRP.

73, VE3BMV

Dear Yuri,

I am enclosing my check to renew my subscription to RADIOSPORTING, I guess I'll try it for another year. I am looking forward to seeing the magazine improve even more over the next 12 months. The past few issues have been most interesting, especially the discussion concerning the "hired guns" or "guest op" controversy. I tend to agree with a lot of the points mentioned by Fred Klein, KS7T, in the November "Mail Room" column. I, like he, would love to see a "100 watt contest" take place. I would also enjoy "watching" just the Major League Big Guns from our country and others go at it for a weekend.

I long ago gave up on ever hoping to do well (against the big guns) in any of the major contests, since my station consists of a barefoot transceiver, a tribander at 35 feet, and a couple of wires for 40 and 80 meters. And, with 3 children to put through college in the next 10-1/2 years, I see no real chance of upgrading my station in the near future. My main goal in contesting now is to contribute some points to the local club effort, and to try to improve on my previous year's score for that particular contest.

One point that I think has been overlooked is the situation where two or more hams (or a club) pool their resources in order to build a "big gun" type station. How do they fit into the guest op or hired gun classes being proposed by some? This seems to be a problem that in some cases, I think, could be resolved if the FCC would once again start issuing club callsigns. Couldn't a person operate such a station without being classed as a multi, or does there always have to be more that one person present in order to put a club station on the air? Oh well, as Fred said in his letter, there will never be a contest held wherein everyone has a an equal chance of winning. It just can't be done!

I also enjoy DXing, and would like to see some articles about some of those exotic DX places. Many times we hear of a DXpedition heading to some small dot on our wall map, and that's almost all we know about it; it's a dot on the map. We know where it is located, but little else. I for one would enjoy reading some background information and the history of some of those places, and maybe a summary of any previous DXpeditions.

Good luck, and thanks for providing a place to vent some frustrations and express an opinion or two.

73, Dick Wright, N9ACD

Dear Dick,

We hope to make substantial improvements in the magazine over the next few months. We are already making some progress and soon we will find a suitable printer who will cater to our needs. New equipment is coming on board and we are learning, fast. Thank you for your patience and support.

In our upcoming WRC contest we will try to address some of the problems with scoring in the contests. We will definitely have a 100 W category and more of a uniform scoring system.

One doesn't need big bucks to get competitive for the contest. By searching around the scrap yards for used aluminum and putting the stuff together, one can build a half decent station. Find some unused tower, hang up some wires for low bands, stretch out some beverages and you could be very competitive in a single band category. We will try to present some of these ideas in the future issues.

Yes, it is unfortunate that FCC doesn't give club calls even though just about every country in the world issues club licenses. Presently you can operate a club station or anyone else's station in a single operator category. Most East European countries automatically put a club station in the multi op category.

I hope that the articles in our December issue answered some of your questions about the rare spots. We are looking for more articles of that caliber.

Keep reading and 73, de VE3BMV

Dear Yuri,

Thanks for using my letter in the November issue. But thought I better point out one error. On page 32 the next to last paragraph should end with don't chase WPX's and not DX's!!

In view of the fact that I type my own letters I chose to place the blame on the typesetter and not the typist!

RE; Fred, KS7T. A big Amen. I think he speaks for a great many of us low power and rather low key contesters. It's hard to feel that you have any chance at all without some sort of super station. Though I do believe that a good operator is worth 2 amps. But the idea of a "Play OFF" of the Top Ten would really be something to have. Maybe just go with qso totals to eliminate any location or propagation advantage.

I also like the 100 watt idea. But then I also think we should have a power limit of around 250 watts anyway!

If you feel that a spotting net should move you into the multi group, then how about memory keyers, computers etc?? I feel that any help, be it inefficient human or the more efficient electronic kind should make it a multi effort.

Oh well, I already know what the ARRL thinks of that !Have fun & CUL,

Monte "Ron" Stark, KU7Y

Dear Monte,

Thanks for pointing out the error. Anything could happen when you type 18 hours a day for about five days. You start seeing things that are not there and vice versa. When we take a break of a few days and read it over again, then it all comes out. By that time it's too late.

On the subject of multi op classification and electronic gadgets helping to operate, I think there is a difference. We would have hard time drawing the line. Where would it stop? At the spark, AM, SSB, keyers or computers? It is a part of everybody's station the same as how well and cleverly you equip it, how you use YOUR imagination and skills to build YOUR station that belongs to you and your callsign. Those willing to think, design

and build, will obviously have the advantage over those who just get their supplies with plastic money. When we compete, it is us and our station. When we get help from somebody else, it is a different story. It would be nice to be able to run the stations on frequency and have someone else, maybe even the whole club, on the repeater looking for the multipliers. One quick break to work the new one and back you go, running the pileup. If it is the single operator category, then let it be a SINGLE operator not the whole club. Otherwise the club can get together and operate in the multi operator category.

For the straight key lovers there is a straight key night contest. For the antique radio lovers there is an antique radio contest. I think we have a contest for just about every taste.

I think the 100 Watt output is the reasonable figure for the "barefoot" category. Most of the rigs are run in that class, so all those barefoot operators can compete against each other and let the big guns run away in their own kilowatt category. WE will probably have three groups - 5 W, 100 W and 1000 W in our upcoming WRC contest. Get ready!

73, VE3BMV

Dear Yuri,

I am glad to be renewing for another year. Your magazine is a much needed breath of fresh air. The exchange of ideas is central to human existence, and amateur radio is no exception.

I enjoy reading the letters that you receive (print) each month. They generally echo my views on the various amateur radio subjects. I must however, disagree with some who want to insist that stations like mine with an assigned call sign that is out of the traditional "call areas" attach a not required "portable" designation. The only valid argument is the fact that the governing body (FCC) has ruled that it is no longer a requirement. This is not to say that the owner of a station who so desires cannot say "portable bathtub" if he or she so desires. Reflection might show some benefit in the fact that a station no longer being in its traditional location requires a little more attention to the exchange required in a given contest.

On other subject, I am glad to see a proposed awards program that discourages list operations and has a new beginning point. I might make a small suggestion in the area of new beginnings. Would it be reasonable to restart the awards races sometime around the beginning of each sunspot cycle? This would allow the newcomer and the recent convert to DXing to start fresh with the "old pros."

Thanks again, Yuri, for a fine effort this year. I hope that you have continued success.

73's Jon Neary, W1UA, Georgia

Dear Jon,

Maybe Paul, K1XM, in this month's Flakey Ideas has a solution for the "portable" operation. I think that the FCC unnecessarily created a "problem" with the call sign policy. On the one hand, it helps to maintain the identity of the ham who moves across the country a lot. On the other hand, it upsets the world over the practice of a call area/geographical identification. Maybe the British system is the best - the ham maintains the number/suffix combination when he moves from G to GM or GW. Other countries reserve the suffix for one person. When he moves, just the prefix changes. For example, OK1BU becomes OK3BU. The identity is preserved and the geographical identification is maintained. Maybe it is just too much to expect logic from the governments. Have you seen the latest in French callsigns?

I think the idea of restarting the award for every sunspot cycle is super. We might try that. This would eliminate the Silent Keys from dominating the Honor Roll and keep the interest up.

Also, should we be including an all time total in the brackets as outlined in our rules, or should we just forget about it as many have indicated?

We love providing you with the wanted information and news. With your support the magazine will grow but, we also need support from the advertisers. I hope they will soon discover what the active and competitive hams are reading. Hi.

73, Yuri

Yuri,

We did not make it to VE2 - Zone 2 this year for CQ-WW-SSB. Everything went to hell in a handcart in a hurry right after we got the permission letter to use the site. Lost 2 operators, 1 generator, 1 motor home and 2 towers. Due to the weather condx in northern P.Q. we decided a tent and dipoles would be sheer suicide! Maybe next year if we can get some solid volunteers with motor homes.

73' Henk K8DD

Dear Sirs:

Please extend my subscription for one year.

I am a member of ARRL and subscribe to CQ, but I enjoy your magazine more than either of those. It is more like the magazines used to be, some years back.

My interests in ham radio are ragchewing and DX and can't find too much of interest in the other magazines. I am not too involved in contests because of age and health, but enjoy fooling around the edges.

73' John W. Turner, W9GDI

Dear John,

You don't have to call us Sirs. We are just a bunch of hams having fun and learning publishing business. We don't have huge offices nor big staff but, we are next to the shack, under the antenna and working till two or three o'clock in the morning. Thanks to our contest spirit we are not giving up and we want to see *RADIOSPORTING* become the No. 1 reading for the competitive ham.

One can take the contests leisurely. Just tune around, call the lonely CQer, (especially if he is a rare one or with a nice signal) or just simply monitor some of the big guns and what they work that you can't hear, or vice versa. Keeping busy, having something to do and looking forward to new things keeps one young.

73 and see you in the pile-up, VE3BMV

Dear Yuri,

If I may, I would like to put in my two cents worth with some suggestions that IRSA may wish to consider. First, let me say that I'm not a contester but I do some light operating in contests and find it to be fun.

I feel that there is an untapped audience for contesting out there: the small station, with small antennas and not too much operating time. I'll bet that of these operators many like to chase DX and may not be too successful. Since many DX and expeditions come out for contests, perhaps you could entice these small stations to become part of the contest crowd. Face it, the contests bring out activity and usually DX and/or rare states in plenty, which is just what these operators may be starved for. In a few hours they could work lots of - to them - new stuff and thus catch the contest bug.

My own situation is: 100 watts output maximum with an 80 meter dipole at 25 feet, a 40 meter dipole at 20 feet and half an HQ1 (the other half was destroyed years ago) at 30 feet. Not your power house station, for sure, but lucky enough with DX. A good deal of which was worked in contests.

The first thing to de-emphasize when approaching this market is contest score, raw bulk. Entice them in with the new countries and expeditions, and let the bug bit by itself. Some will go on into competition and some will stay as light users and admittedly, some will be lost. However, the number of contesters and those who like contesting will be increased and they can, in time, spread the news that the small station can indeed find pleasure in the sport.

For example, my QSO total for the CQ WW CW test was a mere 70. But several of these were new countries, plus KH6 and KH7 on 5 watts (through the 1/2 HQ1 - now that's a thrill!) and to top it off one QSO was D44BC! Not bad considering I was also doing some weekend chores. You can bet that I'll be in the IDXC in February! If my station can do it, so can the others out there who may be scared off by all this talk of Big Guns, Multimega points and Super Stations. Contesting can be fun and exciting for all.

On another topic, I like your DXCA awards. I'm sure they will spur more activity. But, I feel that we have to be careful with 10 MHz as it is a small band and still shared. I would hate to see a contest run in there as it would probably wind up giving all of amateur radio a black eye. I hope that the possibility of 10 MHz DXCA will spur just enough activity there to keep it occupied well. On the other hand, 24 MHz could use a little push. Also, maybe you would like to consider sponsoring contests on 10, 15 and 12 meters to keep things hopping on those bands.

How about the equivalent of a banded WAC for 10, 12, 15, 20, 30 and 40 meters? Especially 10, 12 and 15 meter in this season of poor sunspots. Also, this kind of award gives the smaller station something to shoot for. Maybe a nice everyone - work - everyone contest would do something for 12 meters which is, at least here, usually dead.

I hope this has helped in some. Keep up all that DX and QSL manager news! It's probably what sold me on your magazine. Good luck to you and the IRSA gang.

73, Peter C. Elemendorf, KB2OR

Dear Peter,

Welcome aboard. I hope you will enjoy the magazine and find many good ideas and maybe an inspiration or two in it.

Yes, the easiest way to pick up some new countries, especially for the beginning DXers, is to tune around the contests. There we have some super operators with good stations working the world at a fast pace. One can easily work over 100 countries on any band.

We hope that with our increased publicity more hams will start enjoying contests rather than hating them, after they "discover" what is really behind it all.

Yes, with 10 MHz we would wait with the contest until the band is cleared of of all "commercials." We are planning a monoband contest for other new bands.

The idea of the "WAC" in the same format as the DXCA is probably very attractive for the beginning hams. We just might give it a shot, perhaps starting with January 1, 1986. Start collecting you continents/band.

We hope that our DXCA will spur some activity on our new bands, and this will prove that awards and contests are the grain and salt of our hobby. Without them we would probably be just a bunch of old ladies on the QRU nets.

Thank you for your feedback. It is refreshing to know what is of interest to little pistols. 73, de VE3BMV

Dear Yuri,

I want to pass along my compliments on your publication; it has what I like to read and only CQ comes close. I'm presently active on the low bands, as so many others, and I am approaching 5BDXCC with only a few to go on 80 meters. It has been accomplished with only a tri-bander at the staggering height of 35 feet and dipoles and verticals on the low bands. I can barely get an inverted vee for 80 meters on my small urban lot. Further complications are the typical TVI problems and being on the west coast. Making the haul to Europe on 80 meters is not easy from here anyway and with the midwest and east coast to plow through, is really rough. Without the contests, I would probably have given up on the idea.

The recent CQ WW CW test it was very frustrating with so many stations calling instead of listening. There were times when the QSO rate of one African station was only about one per minute, because of the QRM still calling him. It doesn't do any good to send "wait" or "standby" (on phone); the only ones that hear it are already standing-by, yet some still try to settle the group down. There are solutions, as we all know, but why don't they happen. One of the best is split operation, where the callers can call to their hearts content and at least you can hear the DX station. Another is to work by districts. This one works pretty good, except for the few that don't know where they are during a pileup!

During the WW Phone Contest it was interesting to hear a station in the "window" on 75 meters, with a 6 kHz-wide signal occupying 3797. At one point, I thought I had found a spot to work JA's at 3802. When I asked if the frequency was in use, a W4 responded that it was, however, before I QSY'd, I listened and heard nothing for about two minutes. So, I asked again and the same station told me I should take my contest somewhere else, but still he never made a transmission to another station. Finally, I heard the other station tell the first that the contest had fouled up their QSO, which it turned out, could have been made on 2 meters! It never ceases to amaze me that I utilize only about 30 kHz of the 80 meter band (3500-3530 and 3750-3810) and leave the other 410 kHz alone, but someone running a QRU net or the like, insists on being in that same 90 kHz. I think we would all feel a little silly running up to 3950 kHz to call CQ contest; seems like the marathon QSO group would be able to resist the DX/Contest portion.

So far as the contests go, I don't figure on setting a record when I enter, except I try to better my previous score and look for some new ones. My eventual goal is 5BDXCC on CW and Phone.

See you in the WPX. Keep up the good work with RADIOSPORTING.

73, Jim, WB6JMS

P.S. I recently had the pleasure of hearing a DXer remark to the question "did you work the GW3 up at 3798?" "No, I worked him a few weeks ago on this band and didn't want to add to the QRM." I wish there were more of his kind and less of the guys who like to remind everyone that they have worked the DX station several times during the past week and they have three of his cards. Meanwhile, you haven't been able to copy the DX station Q5 until that evening and propagation is starting to go in the dumper. Hi!

Dear Jim,

The recent CQ WW CW contest was frustrating for many, even with good antenna systems. We had quite a bit of one way propagation. You could hear the stations from the east, but they had a hard time hearing anything from the west. Generally, I find that true contesters are pretty well disciplined in the pileups. They make one or two calls and then they listen and let the DX answer. It is the misbehaved DX animal that resorts to never a ending call. If you get two guys like that, each wanting to be the last one heard, they can go on forever (or until the station goes away or the contest is over). The split operation can be used in the contest but, it should be done a little bit higher up on frequency and with a narrow split of about two to five kHz on phone and one to three on CW.

We are trying to educate and show a better way of operating. Also, we are trying to publicize the good points of contesting. In this way we hope to create some understanding on the part of our casual operator friends. Let's hope we will help to make things better and saner on our bands.

While many are complaining about the contests and contest stations, quite often the contest stations are the only ones that can hear and work modestly equipped stations. This is because of the superior antennas and effort that went into building the stations. Also, the contest operators are the most skilled. They can work about eight stations a minute on phone, while the list undertakers can hardly push one station in a few minutes. The more contesters we have, the better the bands will be.

73 and spread the good word, VE3BMV

Dear Yuri,

Read with great interest the K7UGA article in October issue of *RADIOSPORTING*. Senator Goldwater made an error in his statement. As you can see, he is now corrected. Your magazine is great. 73, Skip, WB8OWM

Attached letter:

Mr. Skip Westrich
1309 24th Street, N.W.
Canton, OH 44709

Dear Skip,

Thanks for calling my error to my attention. I had been to Keesler Air Force Base and, while was just a short visit, I inquired about whether or not they were still teaching code, and they said no. I am now corrected.

I do know they are not teaching the code to the cadets as we used to do. In fact, I had to teach it while I was an instructor in the early part of World War II.

73s, Barry Goldwater (K7UGA)

Military Morse code training to merge

The Defense Department, in a cost-cutting move, has decided to consolidate the manual Morse code training centers of the Army, Air Force, Navy and Marine Corps at Fort Devens Army Base in Ayer, Massachusetts.

In the change, the Air Force will close its Morse code school at Keesler Air Force Base in Biloxi, Mississippi, in 1987. The following year, the Navy and Marine Corps will shut down their joint Morse training facility at Corry Station in Pensacola, Florida.

"The department will realize a net savings approaching $1 million annually by consolidating this course," said Donald C. Latham, Assistant Secretary of Defense for Command, Control, Communications and Intelligence.

About 550 sailors and Marines learn Morse code annually at Cory Station, and 450 Air Force people do so each year at the Keesler center.

Classes last between two and 38 weeks, but average about 20 weeks.

The changes followed a study by the Inter-Service Training Review Organization, a Pentagon commission studying ways to consolidate duplicate training functions by the services, the National Security Agency and the Office of the Secretary of Defense.

"This consolidation action continues the DoD goal of increased training effectiveness and efficiency for all services involved in a similar learning exercise," Latham said.

Although advanced computers are becoming a staple in the military, Morse code remains an important form of communication, officials said. The code is a backup language in areas where setting up computer equipment is impractical or in the event the computers malfunction.

— *Eisenstadt, Navy Times, via W2HBO* Worldradio

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Mansfield Hamfest OHIO will be held Feb. 16, 1986 at the Richland County Fairgrounds, Mansfield, Ohio. Prizes, Auction, and Flea Market in large modern heated buildings. Tickets # 3 in advance and $4 at the door. Tables $5 in advance, $6 at the door. For info send SASE or phone Dean Wrasse, KB8MG, 1094 Beal Rd., Mansfield, Ohio, 44905 (419) 689-2415.

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INTERNATIONAL RADIOSPORT ASSN.

P.C. Box 65, Don Mills, Ontario, Canada M3C 2R6 Tel. (416) 438-6313

Purpose and objectives:

1. To promote international friendship and goodwill through sportsmanship, radio contesting and DXing.

2. To improve the quality of amateur radio operators and operating through education and experience, by voicing the opinions of radio amateurs that are experienced and have contributed to the hobby.

3. To promote amateur radio contesting and other operating-related activities as a sport, and to provide the publicity and recognition that it deserves in the public media.

4. To publish timely articles in the monthly magazine "RADIOSPORTING" on various subjects of interest to Contesters, DXers, SWL, VHF, UHF and microwave enthusiasts, on RTTY, SSTV, computers in communications, fox hunting and anything of interest to the active ham striving for self-improvement. To feature technical articles on equipment design and modifications, antenna construction, radio-wave propagation, and commercial equipment reviews by qualified people.

5. To organize, as an annual event, the "International Contest Symposium," which runs parallel (evenings) with the Dayton Hamvention; to feature timely topics with the participation of some of the world's leading amateurs at the Syposium.

6. To hold an annual Awards Dinner with an entertainment program, where awards for various achievements will be presented.

7. To maintain and publish all time record tables for significant contests.

8. To sponsor and run an annual World Contest Championship, based on results of a number of major contests, with the annual "Contester of the Year" awards in various categories.

9. To administer the "Contest Hall of Fame" and vote on awarding membership to those who have significantly contributed to the sport of contesting.

10. To coordinate and assist in the scheduling of international contests.

11. To hold regular weekly meetings on air on 20 and 80 m. (14.200, 3.830)

12. To provide an automatic, computer controlled bulletin station that transmits the latest DX and Contest news on CW and RTTY.(14.098)

13. All in all, the IRSA is dedicated to the pursuit of excellence and quality in amateur radio by promoting, publicizing and leading the way.

14. Attractive numbered membership certificates and badges are issued to members.

15. IRSA is run by contesters who are selected for their accomplishments and it is independent of any national or commercial organizations.

16. IRSA will assist and sponsor Contests/DXpeditions, Trophies and other radio sporting and publicity events.

17. IRSA is a non profit organization, with all proceeds to be used to finance events and awards sponsored by IRSA and to cover expenses incured by Association.

18. IRSA members can display the IRSA logo on their QSL cards and correspondence; members agree to obey the Contester's Code of Ethics and to promote it.

The initial fee to join the IRSA is US $12; it includes the cost of a certificate and a badge. The yearly membership dues are US $5. (Or 24 and 10 IRCs resp.)

Honorary Life Membership will be awarded to those who significantly contribute to IRSA and the sport of contesting.

Members are entitled to be elected and to elect officers of IRSA. They will also enjoy many services and privileges offered exclusively to members.

RADIOSPORTING

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